ORDER NO. HAD8702016C1
A1

Service Manual

QUARTZ Synthesizer AM/FM Stereo Radio with Double Cassette Tape Deck and Record Player

Stereo Music System

SG-D16

Color

(K)... Black Type

Color	Area
(K)	[M] ..... U.S.A.

System Name	Unit
SG-D160	Music Center, SG-D16
	Speaker, SB-D160 (Made in MEP)
SC-3016D	Music Center, SG-D16
	Speaker, SB-226 (Made in MEP)
	Ruck, SH-226 (Made in MEP)

SPECIFICATIONS

■ AMPLIFIER SECTION

Input sensitivity	
CD	132mV (250mV, IHF '66)
Input impedance	
CD	22 kilohms
Graphic equalizer	100Hz, 1kHz, 10kHz ±10dB
Load impedance	6~16 ohms

■ FM TUNER SECTION

Tuning system	Quartz synthesizer
Frequency range	87.9~107.9MHz (100kHz step)
Sensitivity	25.2dBf (5μV, IHF '58)
Total harmonic distortion	
1kHz	0.3% (MONO), 0.5% (STEREO)
S/N	
MONO	65dB
Stereo separation	
1kHz	35dB
Antenna terminals	75 ohms (unbalanced)

■ AM TUNER SECTION

Frequency range	530~1720kHz (10kHz step)
Sensitivity (for 50mW)	250μV/m (1000kHz)

■ CASSETTE DECK SECTION

Deck system	Auto stop double cassette system
Track system	4-track, 2-channel
Heads	
playback (TAPE 1)	Solid permalloy head
record/playback (TAPE 2)	Solid permalloy head
erase	Double-gap ferrite head
Motors	DC servo motor
Recording system	AC bias
Erase system	AC erase
Tape speed	4.8cm/sec. (1-7/8 ips)
Frequency response	
NORMAL	30Hz~15kHz
S/N	50dB (A-WTD)
Wow and flutter	0.15% (WRMS)
Fast Forward and Rewind Time	Approx. 150 seconds with C-60 cassette tape

■ PHONO SECTION

Player system	Belt Drive Automatic Turntable
Phono motor	DC servo motor
Turntable size	28cm (11″)
Turntable speeds	33-1/3 rpm, 45 rpm
Cartridge type	ceramic (Part No. EPC-13STH)
Stylus	sapphire (Part No. EPS-41ST)
Stylus pressure	5.5g

Panasonic®

Matsushita Services Company
50 Meadowland Parkway,
Secaucus, New Jersey 07094

Panasonic Hawaii Inc.
91-238 Kauhi St. Ewa Beach
P.O. Box 774
Honolulu, Hawaii 96808-0774

Panasonic Sales Company, Division of Matsushita Electric of Puerto Rico, Inc.
Ave. 65 De Infanteria, KM 9.7
Victoria Industrial Park
Carolina, Puerto Rico 00630

■ SPEAKER SYSTEM

Type	1-Way speaker system
Speakers	16cm cone type
Impedance	8 ohms
Input power	6W (music)
Output sound pressure level	88dB/W (1.0m)
Dimensions (W × H × D)	209 × 320 × 146mm
Weight	2.1kg (4.6lb.)

■ GENERAL

Power consumption	30W
Power supply	AC 120V, 60Hz
Dimensions (W × H × D)	430 × 320 × 359mm (16-19/32″ × 12-19/32″ × 14-1/8″)
Weight	5.4kg (11.9lb.)

Specifications are subject to change without notice for further improvement.
Weight and dimensions shown are approximate.

■ CONTENTS

	Page
SAFETY PRECAUTION	2
LOCATION OF CONTROLS	3
PROTECTION CIRCUITRY	4
BEFORE REPAIR AND ADJUSTMENT	4
DISASSEMBLY INSTRUCTIONS	4~8
MEASUREMENTS AND ADJUSTMENTS	9~12
HOW TO REPLACE IC'S(Small outline type)	13
FUNCTION OF TERMINALS	14
RESISTORS & CAPACITORS	15,16
WIRING CONNECTION DIAGRAM	17,18
PRINTED CIRCUIT BOARDS	19~22
EXPLODED VIEW OF CASSETTE DECK MECHANISM	23,24
REPLACEMENT PARTS LIST	23,24
BLOCK DIAGRAM	25,26
SCHEMATIC DIAGRAM	27~31
DESCRIPTION OF LCD PANEL	32
TERMINAL GUIDE OF IC'S, TRANSISTORS AND DIODES	32
REPLACEMENT PARTS LIST	33,34
EXPLODED VIEW OF CABINET AND CHASSIS	35,36
EXPLODED VIEW OF RECORD PLAYER	37
PACKING	38

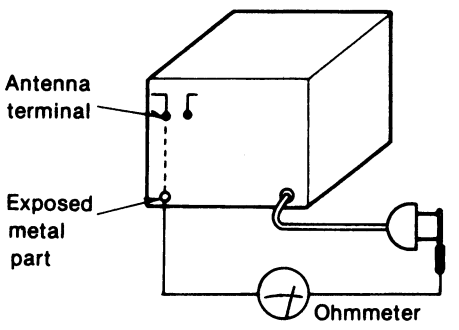
■ SAFETY PRECAUTION (This "safety precaution" is applied only in U.S.A.)

1. Before servicing, unplug the power cord to prevent an electric shock.
2. When replacing parts, use only manufacturer's recommended components for safety.
3. Check the condition of the power cord. Replace if wear or damage is evident.
4. After servicing, be sure to restore the lead dress, insulation barriers, insulation papers, shields, etc.
5. Before returning the serviced equipment to the customer, be sure to make the following insulation resistance test to prevent the customer from being exposed to a shock hazard.

• INSULATION RESISTANCE TEST

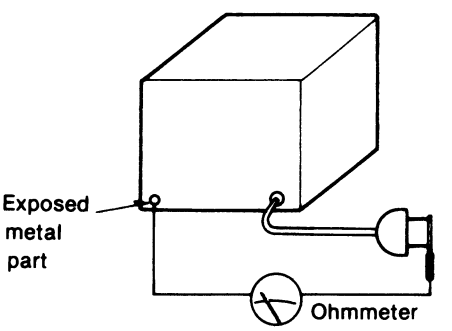
1. Unplug the power cord and short the two prongs of the plug with a jumper wire.
2. Turn on the power switch.
3. Measure the resistance value with ohmmeter between the jumpered AC plug and each exposed metal cabinet part, such as screwheads antenna, control shafts, handle brackets, etc. Equipment with antenna terminals should read between 3MΩ and 5.2MΩ to all exposed parts. (Fig. A) Equipment without antenna terminals should read approximately infinity to all exposed parts. (Fig. B)

Note: Some exposed parts may be isolated from the chassis by design. These will read infinity.



(Fig. A)

Resistance = 3MΩ—5.2MΩ



(Fig. B)

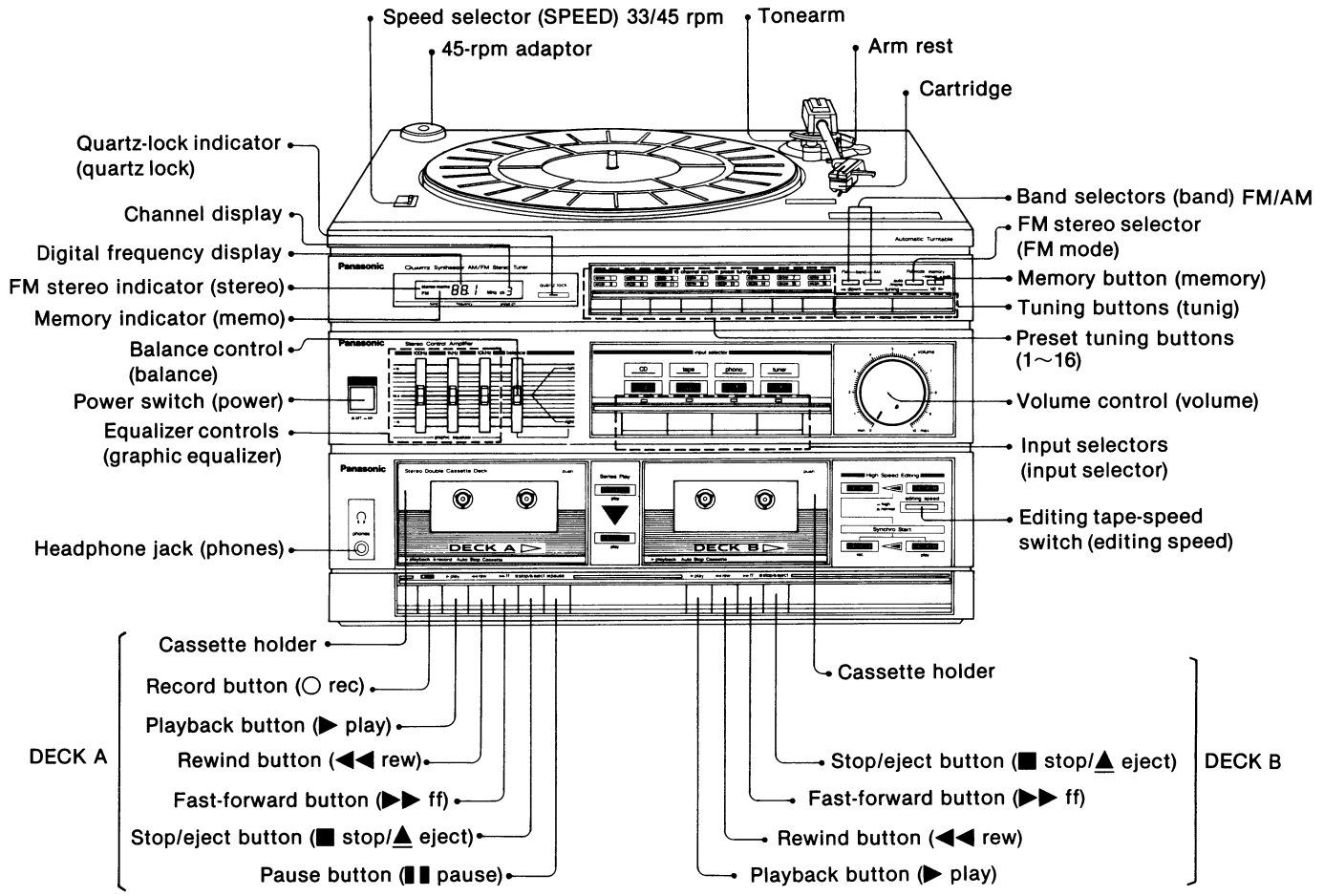
Resistance = Approx ∞

4. If the measurement is outside the specified limits, there is a possibility of a shock hazard. The equipment should be repaired and rechecked before it is returned to the customer.

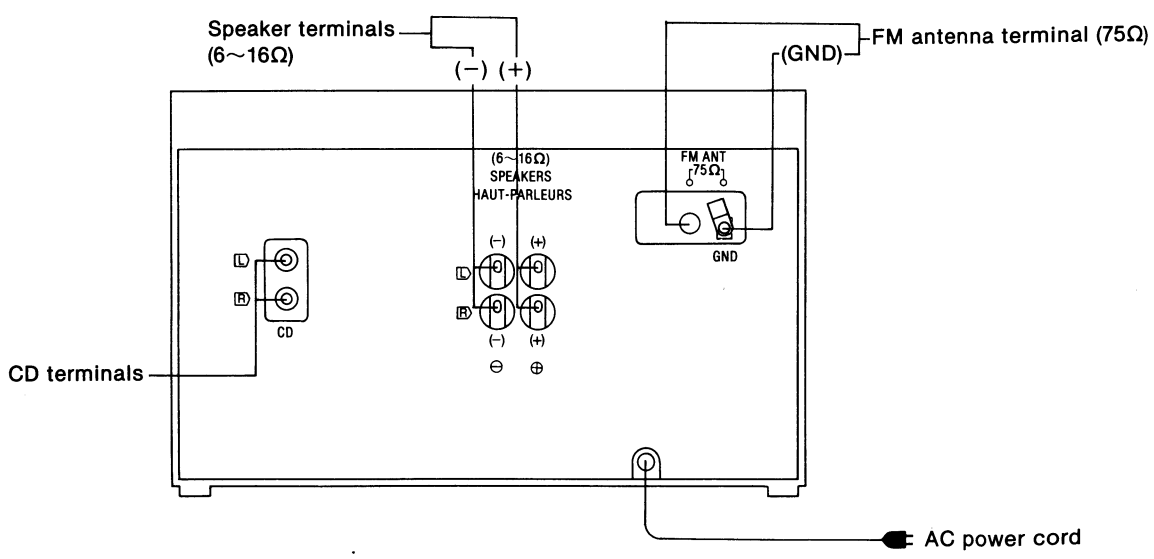
D

■ LOCATION OF CONTROLS

•Front Panel



•Rear Panel



■ PROTECTION CIRCUITRY

The protection circuitry may have operated if either of the following condition is noticed:
- No sound is heard when the power is turned on.
- Sound stops during a performance.

The function of this circuitry is to prevent circuitry damage if, for example, the positive and negative speaker connection wires are "shorted", or if speaker systems with an impedance less than the indicated rated impedance of the amplifier are used.

If this occurs, follow the procedure outlined below.
1. Turn off the power.
2. Determine the cause of the problem and correct it.
3. Turn on the power once again.

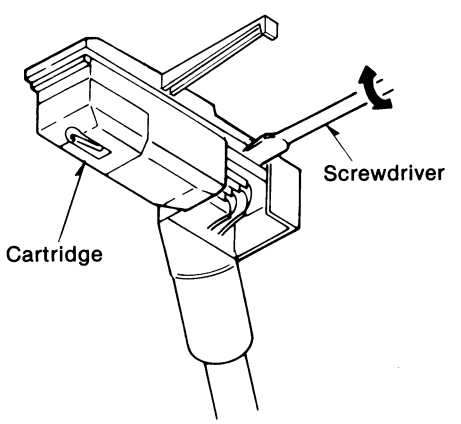
Note:
When the protection circuitry functions, the unit will not operated unless the power is first turned off and then on again.

■ BEFORE REPAIR AND ADJUSTMENT

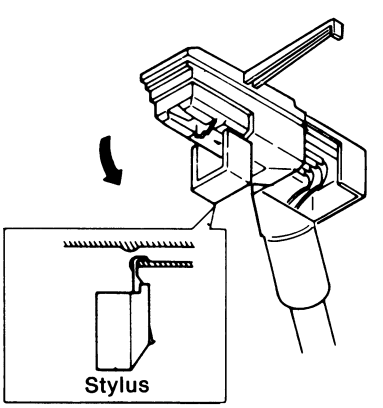
Disconnect AC power, Discharge Power Supply Capacitors C701 through a 10Ω, 5W resistor to ground.
DO NOT SHORT-CIRCUIT DIRECTLY (with a screwdriver blade, for instance), as this may distroy solid state devices.
After repairs are completed, restore power gradually using a variac, to avoid overcurrent.
Current consumption at 120V, 60Hz in NO SIGNAL mode should be 70~140mA.

■ DISASSEMBLY INSTRUCTIONS

Ref. No. 1	How to remove the cartridge
Procedure 1	• Turn the screwdriver in the direction of the arrow.



Ref. No. 2	How to remove the stylus
Procedure 2	• Remove the stylus in the direction of the arrow.

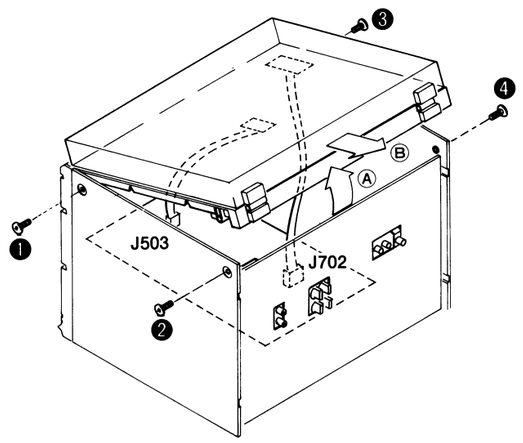


D

Ref. No. 3 — How to remove the record player

Procedure 3

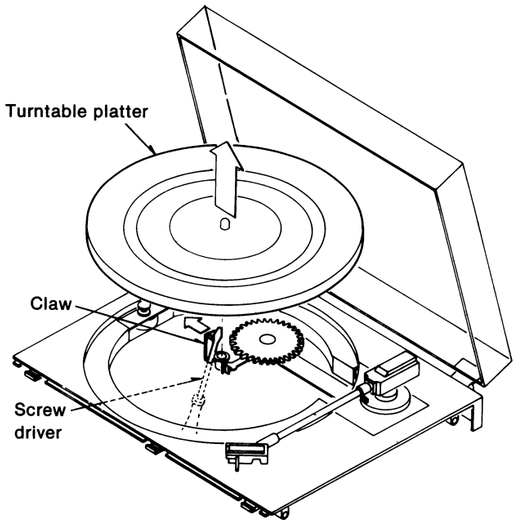
1. Remove the 4 screws (❶~❹).
2. Lift the record player in the direction of the arrow Ⓐ and remove the 2 connectors (J503, J702).
3. Remove the record player in the direction of arrow Ⓑ.



Ref. No. 4 — How to remove the turntable platter

Procedure 3 → 4

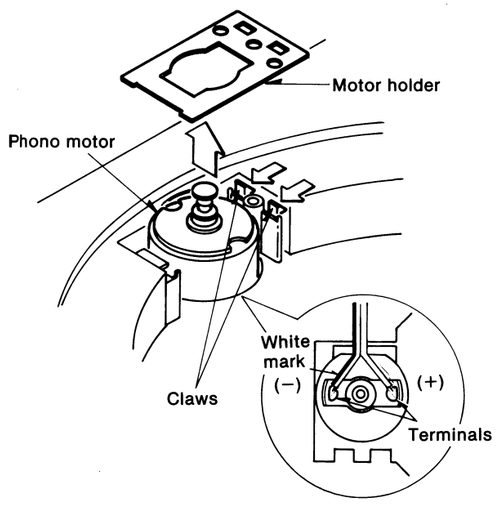
1. Release the claw by screwdriver from under side.
2. Lift the turntable platter.



Ref. No. 5 — How to remove the phono motor

Procedure 3 → 4 → 5

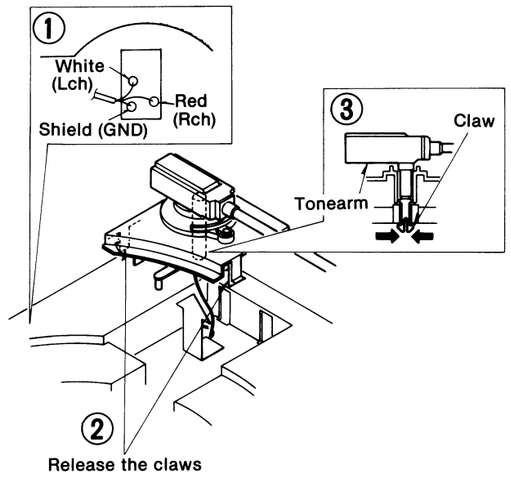
1. Unsolder the terminals of the phono motor.
2. Release the 2 claws and remove the motor holder.
3. Lift the phono motor.



Ref. No. 6 — How to remove the tonearm

Procedure 3 → 6

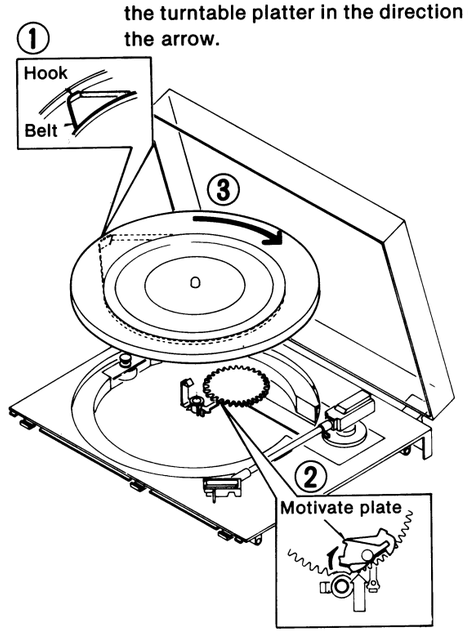
1. Unsolder the 3 leads.
2. Release the 2 claws and remove the tonearm base in the direction of the arrow.
3. Release the claw and lift the tonearm.



Ref. No. 7 — How to install the turntable platter

Procedure 3 → 4 → 7

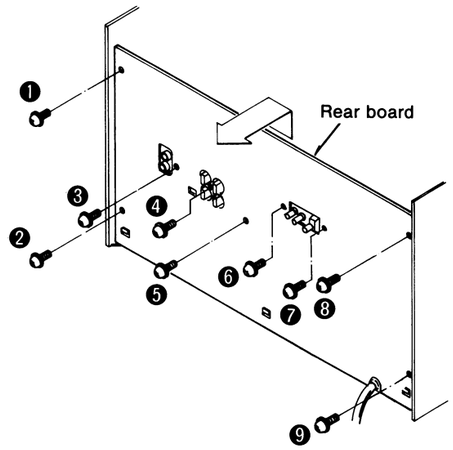
1. Fix the belt to the hook.
2. Set the motivate plate in the direction of the arrow.
3. Install the turntable platter and turn the turntable platter in the direction of the arrow.



Ref. No. 8 — How to remove the rear board

Procedure 3 → 8

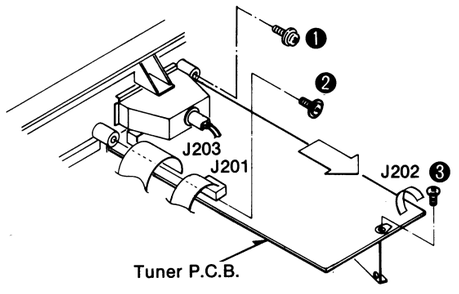
1. Remove the 9 screws (❶~❾).
2. Remove the rear board in the direction of the arrow.



Ref. No. 9 — How to remove the tuner P.C.B.

Procedure 3 → 9

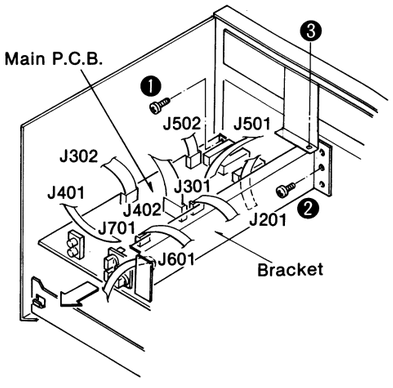
1. Remove the 3 screws (❶~❸).
2. Remove the tuner P.C.B. in the direction of the arrow.



Ref. No. 10 — How to remove the main P.C.B.

Procedure 3 → 8 → 10

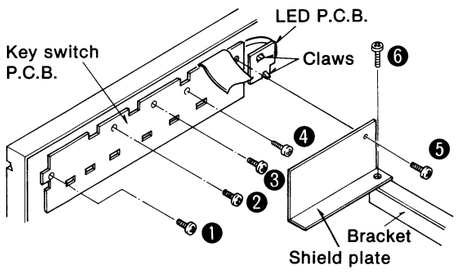
1. Remove the 3 screws in main P.C.B. (❶, ❷) and bracket (❸).
2. Remove the 9 connectors (J201, J301, J302, J401, J402, J501, J502, J601, J701) and romove the main P.C.B. in the direction of the arrow.



Ref. No. 11 — How to remove the key switch P.C.B.

Procedure 3 → 11

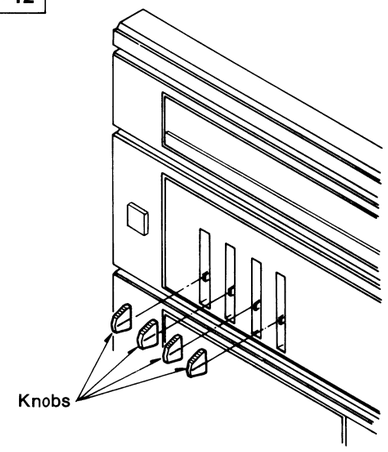
1. Remove the 6 screws in key switch P.C.B. (❶~❺) and bracket of main P.C.B. (❻).
2. Release the 2 claws.



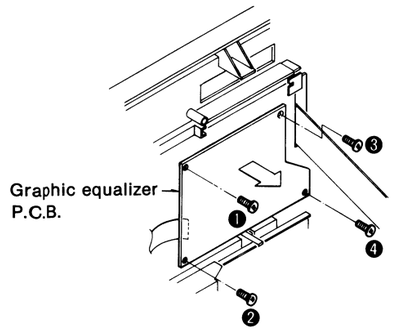
Ref. No. 12 — How to remove the graphic equalizer P.C.B.

Procedure 3 → 9 → 12

- Pull out the 4 knobs.



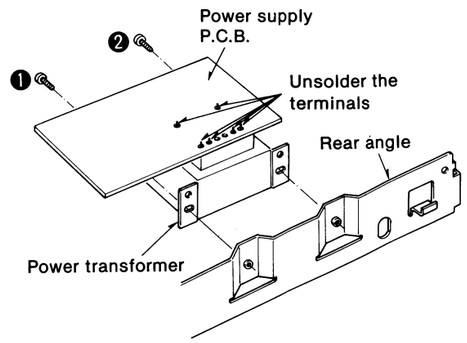
- Remove the 4 screws (❶~❹).



Ref. No. 13 — How to remove the power transformer

Procedure 3 → 13

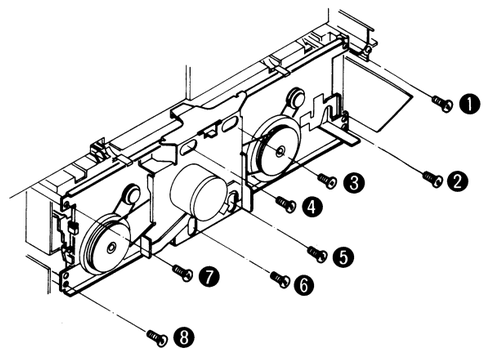
- Remove the 2 screws (❶, ❷).
- Unsolder the terminals of the power transformer.



Ref. No. 14 — How to remove the cassette tape deck

Procedure 3 → 6 → 14

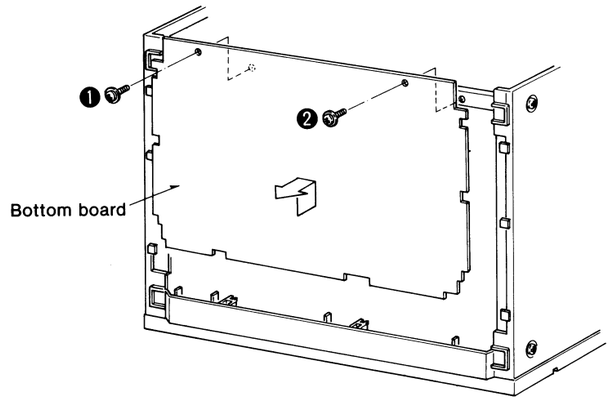
1. Open the cassette holder.
2. Remove the 8 screws (❶~❽).
3. Remove the 3 connectors (J301, J302, J402).



Ref. No. 15 — How to remove the bottom board

Procedure 3 → 15

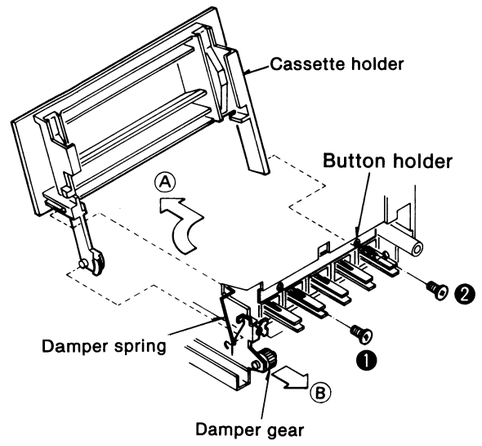
1. Remove the 2 screws (❶, ❷).
2. Remove the bottom board in the direction of the arrow.



Ref. No. 16 — How to remove the cassette holder

Procedure 3 → 16

1. Remove the damper spring.
2. Remove the cassette holder in the direction of the arrow Ⓐ.



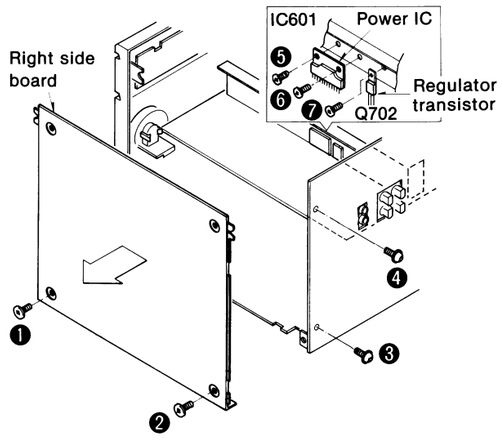
- **To remove the operation buttons**
  - Remove the 2 screws (❶, ❷) of the button holder.
- **To remove the damper ass'y**
  - Pull the damper ass'y in the direction of the arrow Ⓑ.

Ref. No. 17 — How to remove the power IC and regulator transistor

Procedure 3 → 17

1. Remove the 4 screws (❶~❹).
2. Remove the right side board.
3. Unsolder the power IC or regulator transistor.
4. Remove the 3 screws (❺~❼).

- **When mounting the power IC or regulator transistor.**
  Apply silicone compound (SZOGYG6260) to the rear side of power IC or regulator transistor.



D

■ MEASUREMENTS AND ADJUSTMENTS

• AM/FM TUNER

Control positions and equipment used

- AM and FM signal generator (AM and FM-SG)
- Stereo modulator
- Distortion analyser
- Oscilloscope
- AF Oscillator
- AC and DC electronic voltmeter (EVM)
- Frequency counter
- Choke coil (100μH)
- Resistor (330kΩ)
- Capacitor (200pF)

Note: For **T226** (AM-IFT) and **L227** (AM OSC coil), adjusted parts are supplied. So, do not turn the cores of this parts.

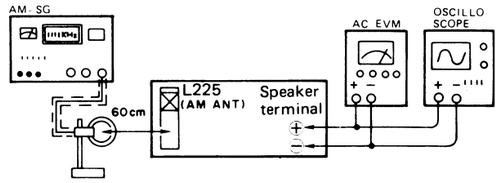
AM-RF ADJUSTMENT

1. Test equipment connection is shown in figure.
2. Set the unit to "**AM**" position.
3. Place the radio frequency display and signal generator setting to **610kHz**.
4. Adjust **L226** for maximum output.
5. Place the radio frequency display and signal generator setting to **1500kHz**.
6. Adjust **CT225** for maximum output.
7. Repeat steps 3.~6.

Note:

Antenna input level must be as low as possible being free from AGC.

AM SIGNAL GENERATOR CONDITION
Modulation.....30%
Modulation frequency.....400Hz



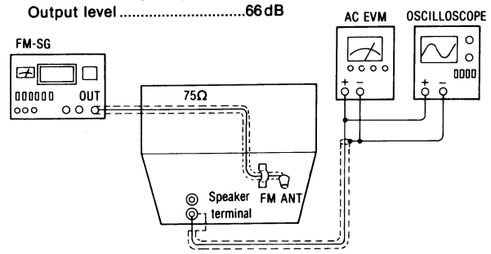
FM-RF ADJUSTMENT

1. Test equipment connection is shown in figure.
2. Place unit into "**FM**" position.
3. Place the radio dial and signal generator setting to **100.10MHz**. Add weak input so that noise is included in the output waveform.
4. Adjust **CT201** and **T225** for maximum output.

Note:

As three output reading will be present, adjustments must be made at center frequency.

FM SIGNAL GENERATOR CONDITION
Modulation.....100%
Modulation frequency.....1kHz
Output level.....66dB



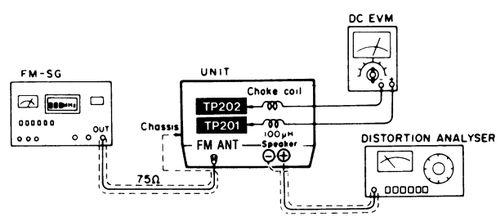
FM MONO DISTORTION ADJUSTMENT

1. Test equipment connection is shown in figure.
2. Set the unit to "**FM**" position.
3. Place the radio frequency display and signal generator setting to **100.10MHz**.
4. Adjust **T227** core so that voltage measured in signal mode is **0mV (0±30mV)** in 300mV range.
5. Adjust **T225** so that the distortion factor of Lch is minimized.
6. Repeat steps 4 and 5 a few times.
7. Make sure that the distortion factors of Lch and Rch are at minimum and nearly equal.

Note:

The adjusting screwdriver used should be made of resin.

FM SIGNAL GENERATOR CONDITION
Modulation.....100%
Modulation frequency.....1kHz
Output level.....66dB



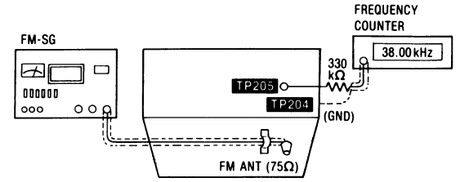
MPX VCO ADJUSTMENT

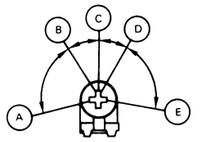
1. Test equipment connection is shown in figure.
2. Set the unit to "**FM auto**" position.
3. Place the radio dial and signal genarator setting to **100.10MHz**.
4. Adjust **VR251** for **38kHz±0.05Hz** on frequency counter reading.
5. Modulate the pilot by 8% and make sure that the stereo indicator lights up.

★ USING ALTERNATE SYSTEM

1. Apply stereo signal from generator or receive the stereo broadcast.
2. Adjust **VR251** until stereo indicator lights up. Cement arm of **VR251** as shown in figure.

FM SIGNAL GENERATOR CONDITION
Modulation.....0% (non-modulation)
Output level.....66dB





Ⓐ–Ⓑ Ⓓ–Ⓔ: Stereo OFF position
Ⓑ–Ⓓ: Stereo ON position (indicator lighting)
Ⓒ: Adjust point of Pilot circuit

• CASSETTE DECK

MEASUREMENT CONDITION:

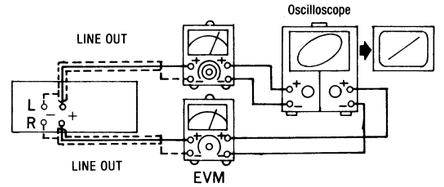
- Make sure heads are clean
- Make sure capstan and pressure roller are clean

TEST TAPE:

- Head azimuth adjustment (8kHz, −20dB): QZZCFM
- Tape speed adjustment (3kHz, −10dB): QZZCWAT
- Normal reference blank: QZZCRA

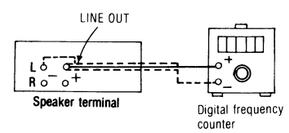
HEAD AZIMUTH ADJUSTMENT (DECK A, B)

1. Test equipment connection is shown in figure.
2. Playback the azimuth adjusted part (8kHz, −20dB) of the test tape (QZZCFM) and regulate the angle adjusting screw so that the outputs of L-CH and R-CH are maximized. (When the adjusting positions are different with L-CH and R-CH, find a position where the outputs of L-CH and R-CH are balanced, and then make the adjustment.)
3. At the same time, draw a lissajous waveform and eliminate phase deflection.
4. After the adjustment, apply screw-lock to the angle adjusting value.



TAPE SPEED ADJUSTMENT (DECK A, B)

1. Test equipment connection is shown in figure.
2. Set the unit to "**TAPE**" position.
3. Playback the middle part of the test tape (QZZCWAT).
4. Adjust VR401 in the motor so that the output is within the standard. (DECK A, B)

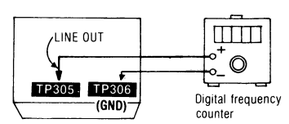


DECK B Standard value: 3000±20Hz

DECK A Standard value: 3000±45Hz

BIAS OSCILLATION ADJUSTMENT (DECK A)

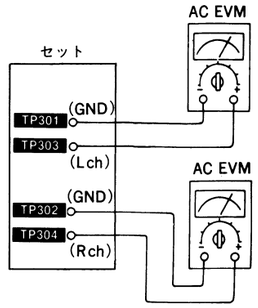
1. Test equipment connection is shown in figure.
2. Set the unit to "**TAPE**" position.
3. Place cassette deck into **REC** mode.
4. Adjust **L355** for **95~100kHz** on frequency counter reading.



RECORDING BIAS ADJUSTMENT (DECK A)

1. Test equipment connection is shown in figure.
2. Insert the normal tape.
3. Press the record and pause buttons.
4. Minimize the input level control and adjust **VR355** so that the output between **TP301** (L-CH) {**TP302** (R-CH)} and **TP303** (L-CH) {**TP304** (R-CH)} is within the standard.

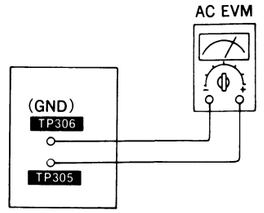
DECK A Standard value: 4.0~4.5mV



ERASE CURRENT ADJUSTMENT (DECK A)

1. Test equipment connection is shown in figure.
2. Insert the normal tape.
3. Press the record and pause buttons.

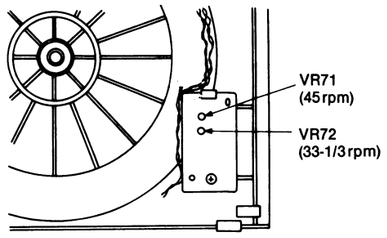
DECK A Standard value: 70±5mV



ROTATING SPEED ADJUSTMENT

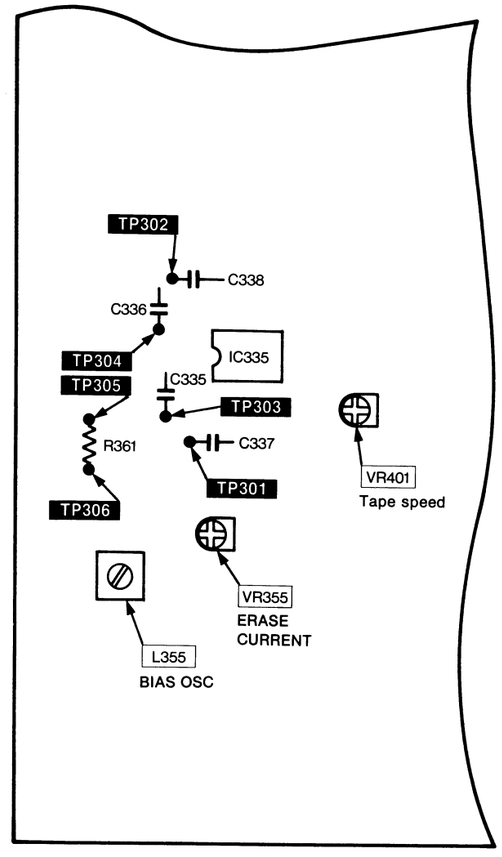
1. Set the speed selector to "**33**".
2. Turn the power switch "on" and press the start button.
3. Adjust **VR72** so that the turntable platter rotates at the rated speed. **(33-1/3rpm)**
4. Set the speed selector to "**45**".
5. Adjust **VR71** so that the turntable platter rotates at the rated speed. **(45rpm)**

Note: Be sure to adjsut 33-1/3rpm first.

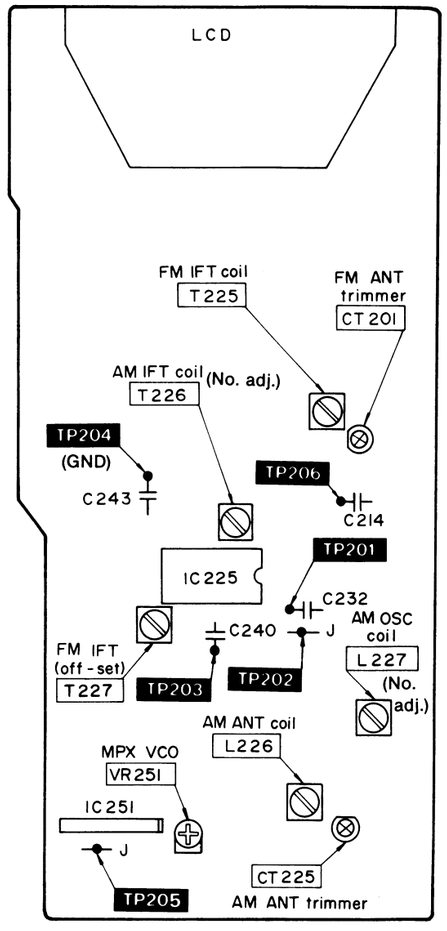


■ ADJUSTMENT POINTS

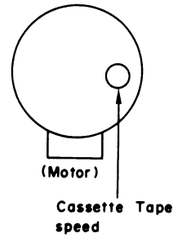
• Main P.C.B.



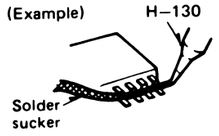
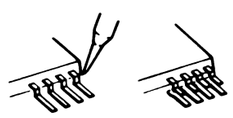
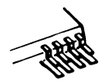
• Tuner P.C.B.



• Tape Motor (DECK A, B)



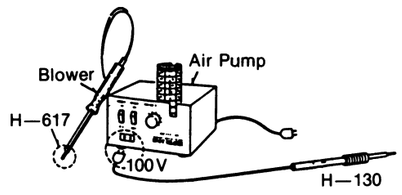
■ HOW TO REPLACE IC'S (Small outline type)

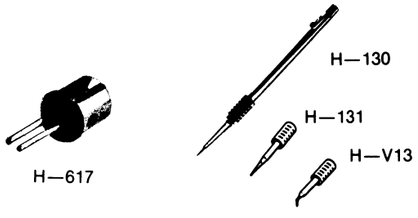
Replacing procedure			Cautions
1	Reduce the amount of solder on each pin of the integrated circuit by use of a solder sucker.	(Example) H–130 	• Recommended tool .....Special soldering iron * H605M and H-130. * H605E and H-130. • Do not touch the soldering iron to the area for a long time. It may otherwise cause removal of the print foil. • When shifting the pin upward, do the job quickly while the solder is melting. If the solder is hard, it may cause removal or breakage of the print foil. • When using a pencil type soldering iron. 1. Completely remove the solder from each IC pin by use of solder sucker. 2. Raise each pin by means of an eyeleteer, hold the pliers then remove IC package from P.C.B.
2	Melt the solder on the pin (one electrode) with the soldering iron.		
3	While the solder is melting, shift the pin upward by the soldering iron to remove it from the foil.		
4	Remove each pin from the foil according to the above-mentioned procedure.		

*** Special soldering iron**
(Refer to Technical Information, ORDER NO. GAD84125486T1)...For U.S.A. and Canada
(Refer to Technical Information, ORDER NO. GAD84115476T8)...For others

•H–605 Spot Heater (hot-air solder iron)
This device that uses hot air to melt solder was developed to remove Flat-Package ICs, RHCs and chip parts.

- H–605M (For 120V power source)
- H–605E (For 200V/220V/240V power source)





•H–617 Twin Nozzle (for spot heater)
Special nozzle for the removal of RHCs and chip resistors. (Nozzle diameter: 1.0mm×2)

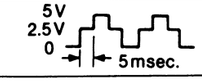
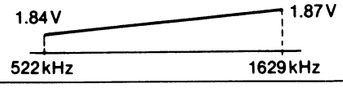
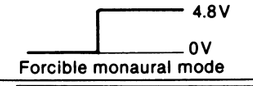
•H–130 Slim Pencil Solder Iron
An ultrasmall ceramic heater solder iron is extremely handy for soldering chip parts, RHCs, ICs etc., to high-density circuit boards.
Features:

• Rated power:	100V, 15W
• Max. temp.:	400°C
• Heater:	ceramic (long life)
• Insulation resistance:	100MΩ
• Length:	178mm
• Weight:	16g (not including cord)

•H–131, H–V13 Cap Bits
Solder tip for the slim pencil Solder Iron is composed of a bit holder and a corrosion resistance solder tip.
Permits changing of solder tips even while still hot.
• Solder tip: 0.3mm

■ FUNCTION OF IC TERMINALS

• IC901 (UPD1718G514) PLL controller

PIN NO.	IN/OUT	MARK	DESCRIPTION OF TERMINAL
1~4	OUTPUT	LCD4~LCD1	Segment signal output for LCD display.
5	OUTPUT	COM2	Common of LCD. 
6		COM1	
7	INPUT	V_{DD}	Power supply terminal.
8	INPUT	FM	Input for FM OSC output frequency divided to 1/32 or 1/33 by pre-scaler.
9	INPUT	AM	Input for AM OSC output. 
10	——	GND	Ground terminal.
11	——	EO1	Not used in this unit.
12	OUTPUT	EO2	Error output of PLL. The frequency is output as a result of comparison between crystal frequency and FM or AM (MW/LW) station frequency.
13	INPUT	CE	Power supply detection. "H" input with it connected to home-use power outlet socket. H → 4V, L → 0V
14	——	NC	Not used in this unit.
15	OUTPUT	X1	Connecting terminal for crystal oscillator. The crystal connected is at 4.5MHz.
16	INPUT	X2	
17	INPUT	SD	Station detection. 1. Signal received → H (5V) 2. NO signal → L (0V)
18	INPUT	REMOTE	Remote control input terminal. Power supply connecting.
19	OUTPUT	FM	"H" output in FM mode.
20	OUTPUT	FM MONO	Forcible monaural selection.  Forcible monaural mode
21~24	INPUT	K3~K0	Input terminal for key return signal from external key matrix.
25~28	OUTPUT	PB3~PB0	Output terminal for key source signal data.
29~31		PC3~PC1	
32	OUTPUT	MUTE	This is the output terminal to eliminate shock noise due to unlocking at PLL. <Muting output> 1. Pin 13 (CE) is L → H or H → L. 2. Power switch "off". 3. Frequency change. (up/down, FM ↔ AM) 4. FM IF selection. Muting output operation
33	INPUT	V_{DD}	Power supply terminal.
34~52	OUTPUT	LCD23~LCD5	Segment signal output for LCD display.

Pin No.	25	26	27	28	29
21	up	AM	CH5 /13	CH1 /9	—
22	down	—	CH6 /14	CH2 /10	—
23	—	FM	CH7 /15	CH3 /11	memo
24	—	mode	CH8 /16	CH4 /12	—

■ RESISTORS & CAPACITORS

Notes: * Important safety notice:
Components identified by ⚠ mark have special characteristics important for safety. When replacing any of these components use only manufacturer's specified parts.
* Bracketed indications in Ref. No. columns specify the area.
Parts without these indications can be used for all areas.

Numbering System of Resistor

Example

ERD	25	F	J	102
Type	Wattage	Shape	Tolerance	Value
ERX	2	AN	J	471
Type	Wattage	Shape	Tolerance	Value 47x10¹ (ohm)

Numbering System of Capacitor

Example

ECKD	1H	102	Z	F
Type	Voltage	Value	Tolerance	Peculiarity
ECEA	50	M		330
Type	Voltage	Peculiarity		Value (33x10° microfarad)

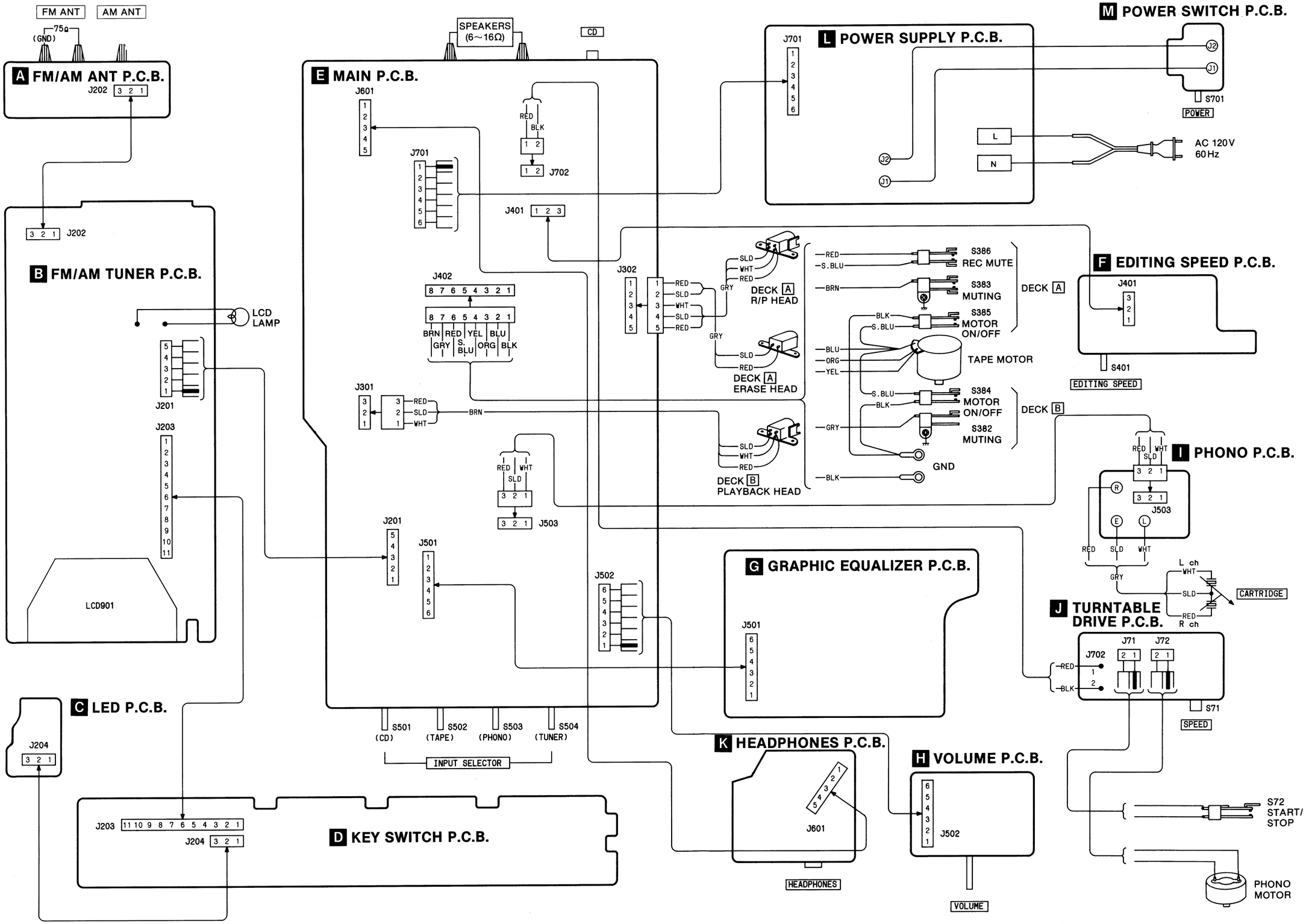
Resistor Type	Wattage	Tolerance
ERD : Carbon ERG : Metal Oxide ERX : Metal Film ERQ : Fuse Type Metal ERD□ L : Carbon (chip) ERC□ K : Metal Film (chip) ERC : Solid	10 : 1/8W 12 : 1/2W 25 : 1/4W 1A : 1W 18 : 1/8W S2 : 1/4W S1 : 1/2W 2F : 1/4W 50 : 1/2W 2A : 2W	J : ±5% F : ±1% G : ±2% K : ±10%

Capacitor Type	Voltage	Tolerance
ECE : Electrolytic ECCD : Ceramic ECKD : Ceramic ECQM : Polyester ECQP : Polyproylene ECG : Ceramic ECEA□□□N: Non Polar Electrolytic QCU□ : Ceramic (Chip Type) ECUX : Ceramic (Chip Type) ECF : Semiconductor EECW : Liquid electrolyte double layer capcitor	0J : 6.3V 1A : 10V 1C : 16V 1E : 25V 1H : 50V 1V : 35V 50 : 50V 05 : 50V 2H : 500V 2A : 100V 1 : 100V KC: 400V AC KC: 125VAC (UL) 1J : 63V	C : ±0.25pF J : ±5% K : ±10% Z : +80% -20% P : +100% -0% M : ±20% D : ±0.5pF G : ±2%

Ref. No.	Part No.	Part Code
RESISTORS		
R71, R72	ERDS2TJ561	001 152 2364 2
R73	ERDS2TJ152	001 152 2350 8
R74	ERDS2TJ472	001 152 2362 4
R201	ERDS2TJ332	001 152 2357 1
R202	ERDS2TJ824	001 152 2457 8
R203	ERDS2TJ332	001 152 2357 1
R204	ERDS2TJ221	001 152 2431 8
R205	ERDS2TJ470	001 152 2442 5
R206	ERDS2TJ333	001 152 2358 0
R207	ERDS2TJ274	001 152 2437 2
R208, R209	ERDS2TJ221	001 152 2431 8
R210	ERDS2TJ474	001 152 2443 4
R211	ERDS2TJ102	001 152 2346 4
R212	ERDS2TJ332	001 152 2357 1
R213	ERDS2TJ224	001 152 2433 6
R214	ERDS2TJ222	001 152 2353 5
R225	ERDS2TJ824	001 152 2457 8
R226	ERD25FJ122	001 152 0226 9
R227	ERDS2TJ104	001 152 2348 2
R228	ERDS2TJ102	001 152 2346 4
R229, R230	ERDS2TJ122	001 152 2423 8
R231	ERDS2TJ562	001 152 2445 2
R232	ERDS2TJ682	001 152 2365 1
R233	ERDS2TJ681	001 152 2449 8
R234	ERDS2TJ222	001 152 2353 5
R235	ERDS2TJ391	001 152 2360 6
R236	ERDS2TJ332	001 152 2357 1
R237	ERDS2TJ104	001 152 2348 2
R238, R244	ERDS2TJ103	001 152 2347 3
R251	ERDS2TJ470	001 152 2442 5
R252	ERDS2TJ472	001 152 2362 4
R253	ERDS2TJ224	001 152 2433 6
R254	ERDS2TJ103	001 152 2347 3
R255	ERDS2TJ102	001 152 2346 4
R256, R257	ERDS2TJ332	001 152 2357 1
R258	ERDS2TJ471	001 152 2361 5
R261, R262	ERDS2TJ822	001 152 2455 0
R263, R263	ERDS2TJ103	001 152 2347 3
R264, R264	ERDS2TJ103	001 152 2347 3
R301, R302	ERDS2TJ100	001 152 2420 1
R303, R304	ERD25FJ221	001 152 0260 7
R305, R306	ERDS2TJ333	001 152 2358 0
R307, R308	ERDS2TJ824	001 152 2457 8
R309, R310	ERDS2TJ221	001 152 2431 8
R311, R312	ERDS2TJ224	001 152 2433 6
R313, R314	ERDS2TJ682	001 152 2365 1
R315, R316	ERDS2TJ223	001 152 2432 7
R317, R318	ERDS2TJ100	001 152 2420 1
R319, R320	ERDS2TJ221	001 152 2431 8
R321, R322	ERDS2TJ333	001 152 2358 0
R323, R324	ERDS2TJ824	001 152 2457 8
R325, R326	ERDS2TJ221	001 152 2431 8
R327, R328	ERDS2TJ224	001 152 2433 6
R329, R330	ERDS2TJ682	001 152 2365 1
R331, R332	ERD25TJ223	001 152 1863 2
R335, R336	ERDS2TJ183	001 152 2429 2
R337, R338	ERDS2TJ100	001 152 2420 1
R339, R340	ERDS2TJ561	001 152 2364 2
R341, R342	ERDS2TJ153	001 152 2351 7
R343, R344	ERDS2TJ272	001 152 2354 4
R345, R346	ERDS2TJ104	001 152 2348 2
R349, R350	ERDS2TJ820	001 152 2453 2
R351, R352	ERDS2TJ272	001 152 2354 4
R353, R354	ERDS2TJ472	001 152 2362 4
R355	ERDS2TJ104	001 152 2348 2
R356	ERDS2TJ472	001 152 2362 4
R357	ERDS2TJ470	001 152 2442 5
R358	ERDS2TJ100	001 152 2420 1
R359	ERD25FJ470	001 152 0309 7
R360	ERDS2TJ4R7	001 152 2826 3
R361	ERD25FJ1R0	001 152 0208 1
R401	ERDS2TJ105	001 152 2422 9
R402	ERDS2TJ392	001 152 2439 0
R403	ERDS2TJ183	001 152 2429 2
R404	ERDS2TJ682	001 152 2365 1
R405	ERDS2TJ102	001 152 2346 4
R406, R407	ERD25FJ4R7	001 152 0303 3
R463, R464	ERDS2TJ223	001 152 2432 7
R465, R467	ERDS2TJ472	001 152 2362 4
R468	ERDS2TJ472	001 152 2362 4
R471, R472	ERDS2TJ332	001 152 2357 1
R473	ERDS2TJ103	001 152 2347 3
R474	ERDS2TJ102	001 152 2346 4
R475, R476	ERDS2TJ155	001 152 2766 8
R477, R478	ERDS2TJ155	001 152 2766 8
R479, R480	ERDS2TJ104	001 152 2348 2
R481, R482	ERDS2TJ102	001 152 2346 4
R483	ERDS2TJ103	001 152 2347 3
R484, R485	ERDS2TJ222	001 152 2353 5
R486, R487	ERDS2TJ103	001 152 2347 3
R489, R490	ERDS2TJ103	001 152 2347 3
R491	ERDS2TJ152	001 152 2350 8
R492	ERDS2TJ222	001 152 2353 5
R501, R502	ERDS2TJ824	001 152 2457 8
R503, R504	ERDS2TJ473	001 152 2363 3
R507, R508	ERDS2TJ563	001 152 2446 1
R509, R510	ERDS2TJ822	001 152 2455 0
R511, R512	ERD25FJ102	001 152 0215 2
R513, R514	ERDS2TJ104	001 152 2348 2
R525, R526	ERDS2TJ563	001 152 2446 1
R527, R528	ERDS2TJ683	001 152 2450 5
R535, R536	ERDS2TJ183	001 152 2429 2
R537, R538	ERDS2TJ152	001 152 2350 8
R561, R562	ERDS2TJ562	001 152 2445 2
R563, R564	ERDS2TJ682	001 152 2365 1
R565, R566	ERDS2TJ562	001 152 2445 2
R567	ERD25FJ221	001 152 0260 7
R601, R602	ERDS2TJ102	001 152 2346 4
R603, R604	ERDS2TJ151	001 152 2426 5
R605, R606	ERDS2TJ271	001 152 2435 4
R607, R608 ⚠	ERDS2TJ3R9	001 152 2871 8
R652	ERDS2TJ562	001 152 2445 2
R653	ERDS2TJ222	001 152 2353 5
R655	ERDS2TJ223	001 152 2432 7
R656	ERDS2TJ273	001 152 2436 3
R702	ERDS2TJ101	001 152 2421 0
R703	ERDS2TJ102	001 152 2346 4
R704	ERDS1TJ335	001 152 5952 6
R705	ERDS2TJ681	001 152 2449 8
R706	ERDS2TJ101	001 152 2421 0
R707 ⚠	ERDS1FJ2R2	001 152 2755 1
R750, R751	ERDS2TJ473	001 152 2363 3
R752	ERDS2TJ153	001 152 2351 7
R753	ERDS2TJ473	001 152 2363 3
R754	ERDS2TJ392	001 152 2439 0
R901	ERDS2TJ562	001 152 2445 2
R902	ERDS2TJ822	001 152 2455 0

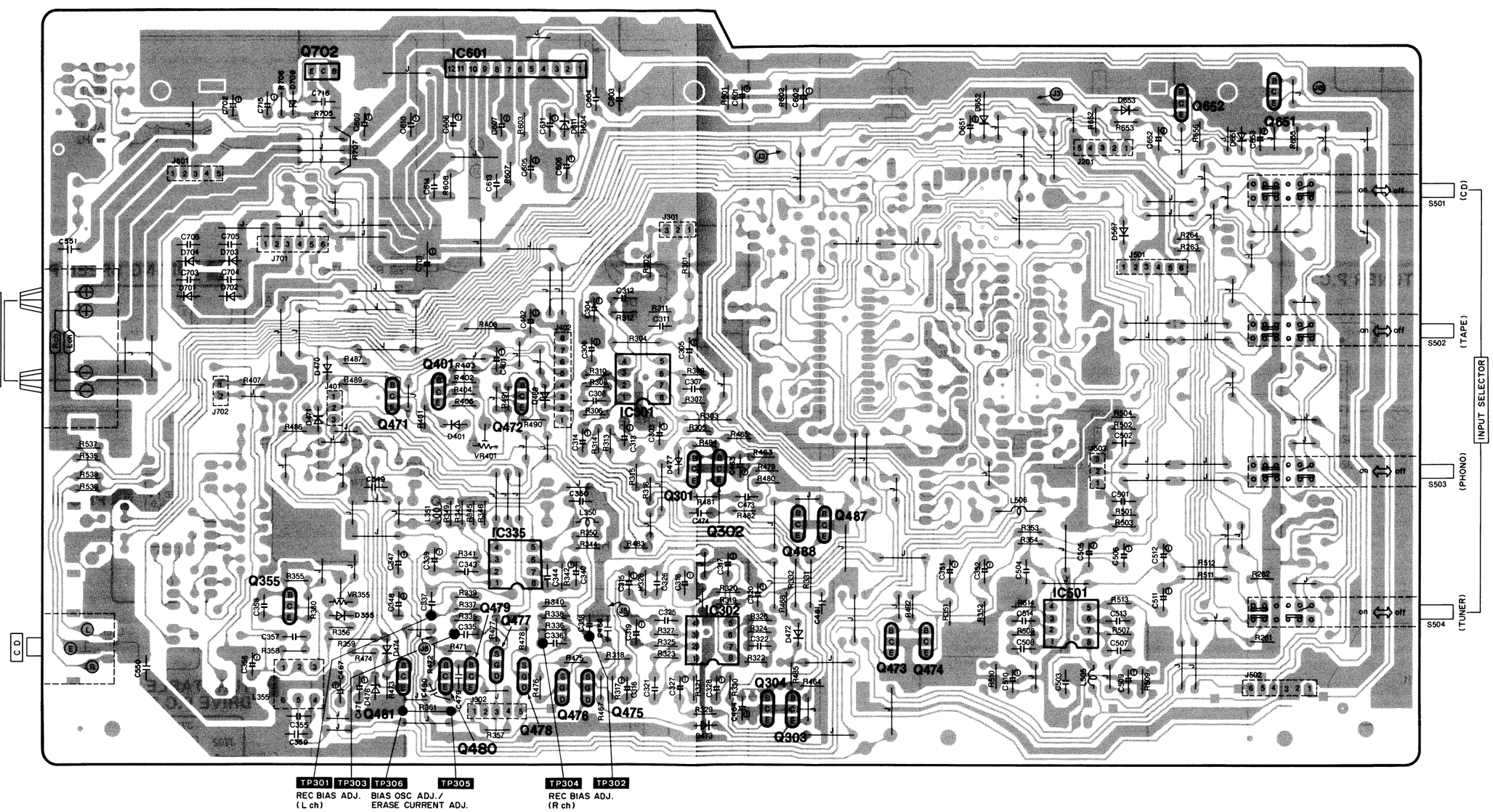
Ref. No.	Part No.	Part Code
R903	ERDS2TJ681	001 152 2449 8
R904	ERDS2TJ103	001 152 2347 3
R905	ERDS2TJ102	001 152 2346 4
R906	ERDS2TJ153	001 152 2351 7
R907	ERDS2TJ104	001 152 2348 2
R908, R909	ERDS2TJ103	001 152 2347 3
R910, R911	ERDS2TJ103	001 152 2347 3
R912, R913	ERDS2TJ103	001 152 2347 3
R914, R915	ERDS2TJ103	001 152 2347 3
R916	ERDS2TJ103	001 152 2347 3
R917	ERDS2TJ273	001 152 2436 3
R918, R919	ERDS2TJ103	001 152 2347 3
R920	ERDS2TJ104	001 152 2348 2
R921	ERD25FJ2R2	001 152 0251 8
R922	ERDS2TJ271	001 152 2435 4
R923	ERDS2TJ102	001 152 2346 4
R924	ERDS2TJ473	001 152 2363 3
R925	ERDS2TJ104	001 152 2348 2
R927	ERDS2TJ333	001 152 2358 0
R928	ERDS2TJ102	001 152 2346 4
R929	ERDS2TJ104	001 152 2348 2
R930	ERDS2TJ681	001 152 2449 8
R931	ERDS2TJ103	001 152 2347 3
R932	ERDS2TJ471	001 152 2361 5
R933	ERDS2TJ103	001 152 2347 3
R935	ERDS2TJ333	001 152 2358 0
R937	ERDS2TJ824	001 152 2457 8
CAPACITORS		
C71	ECEA1HU3R3	001 120 3254 1
C72	ECEA1CU220	001 120 2906 2
C73	ECEA1HU010	001 120 2842 1
C74 ⚠	ECEA1CU470	001 120 2835 0
C201	ECCD1H470KC	001 103 0628 0
C202	ECCD1H330KC	001 103 0569 4
C203	ECCD1H150KC	001 103 0410 6
C204, C205	ECKD1H102PF	001 103 1435 3
C206	ECKD1H103PF	001 103 1449 7
C207	ECCD1H030CC	001 103 0230 8
C208	ECKD1H102KB	001 103 1414 8
C209, C210	ECCD1H010CC	001 103 0215 7
C211	RCBS1H100JLY	001 103 5564 9
C212	ECKD1H181KB	001 103 1473 7
C213, C214	ECKD1H103PF	001 103 1449 7
C215	ECCD1H050CC	001 103 0251 3
C216	ECKD1H102KB	001 103 1414 8
C217	ECCD1H080CC	001 103 0284 4
C218	ECCD1H220KC	001 103 0494 6
C219	ECCD1H060CC	001 103 0264 8
C220	ECCD1H050CC	001 103 0251 3
C221	ECCD1H120KC	001 103 0370 7
C222	ECKD1H223PF	001 103 1510 9
C224	ECCD1H470K	001 103 0627 1
C226	ECFTD473JX	001 108 0336 4
C227	ECCD1H150KC	001 103 0410 6
C228	ECQP2A471JZ	
C229, C230	ECKD1H103PF	001 103 1449 7
C231, C232	ECKD1H103PF	001 103 1449 7
C233	ECEA1HUR47	001 120 3249 8
C234	ECEA1CU100	001 120 2905 3
C235	ECEA0JU101	001 120 2829 8
C236	ECCD1H080CC	001 103 0284 4
C237	ECCD1H470K	001 103 0627 1
C238	ECEA1HU3R3	001 120 3254 1
C239	ECEA1EU4R7	001 120 2840 3
C240	ECCD1H101K	001 103 0341 2
C241, C242	ECKD1H223PF	001 103 1510 9
C243, C244	ECKD1H103PF	001 103 1449 7
C248	ECKD1H103PF	001 103 1449 7
C251	ECEA1EU4R7	001 120 2840 3
C252	ECEA1HSR33	001 120 3248 9
C253	ECEA0JS102	001 120 0152 8
C254	ECQP2A102JZ	001 106 2345 5
C255	ECEA1CU100	001 120 2905 3
C256, C257	ECFTD223JX	001 108 0333 7
C258, C259	ECEA1EU4R7	001 120 2840 3
C261	ECKD1H103PF	001 103 1449 7
C262	ECKD1H223PF	001 103 1510 9
C263	RCBS1H471KBY	001 103 5630 6
C265	ECKD1H223PF	001 103 1510 9
C303, C304 ⚠	ECEA1CU470	001 120 2835 0
C305, C306	ECEA0JU101	001 120 2829 8
C307, C308	ECFT1E392KDY	
C311, C312	ECKD1H681K	001 103 1580 5
C313, C314	ECEA1EU4R7	001 120 2840 3
C315, C316	ECEA1EU4R7	001 120 2840 3
C317, C318 ⚠	ECEA1CU470	001 120 2835 0
C319, C320	ECEA0JU101	001 120 2829 8
C321, C322	ECFT1E392KDY	
C325, C326	ECKD1H681K	001 103 1580 5
C327, C328	ECEA1EU4R7	001 120 2840 3
C335, C336	ECQM1H122JZ	001 106 0683 8
C337, C338	ECQM1H472JZ	001 106 0801 0
C339, C340	ECEA1HU010	001 120 2842 1
C343, C344	ECCD1H120KC	001 103 0370 7
C347, C348	ECEA1HU010	001 120 2842 1
C349, C350	ECFT1E822KDY	
C351, C352	ECEA1HUR47	001 120 3249 8
C355	ECQM1H472JZ	001 106 0801 0
C356	ECEA50M3R3	001 120 1117 7
C357	ECQM1H562JZ	001 106 0820 7
C358	ECQM1H473JZ	001 106 0810 9
C359, C359	ECQP2A471JZ	
C401	ECEA1CU330	001 120 2834 1
C402	ECEA1CU221	001 120 2833 2
C403	ECEA1HU010	001 120 2842 1
C463, C464 ⚠	ECEA1CU470	001 120 2835 0
C466	ECKD1H223PF	001 103 1510 9
C467	ECEA1CU100	001 120 2905 3
C471 ⚠	ECEA1CU470	001 120 2835 0
C473, C474	ECFT1E822KDY	
C479, C480	ECKD1H223PF	001 103 1510 9
C481	ECKD1H223PF	001 103 1510 9
C501, C502	ECCD1H120KC	001 103 0370 7
C503, C504	ECFT1E104KDY	
C505, C506	ECEA1HU010	001 120 2842 1
C507, C508	ECCD1H470K	001 103 0627 1
C509, C510	ECEA1CU220	001 120 2906 2
C511, C512	ECEA1HU010	001 120 2842 1
C513, C514	ECKD1H102KB	001 103 1414 8
C525, C526	ECFTD223JX	001 108 0333 7
C550, C551	ECKD1H223PF	001 103 1510 9
C561, C562	ECEA50ZR68	001 120 1290 5
C563, C564	ECFTD473JX	001 108 0336 4
C565, C566	ECFT1E683KDY	
C567, C568	ECFT1E472KDY	001 108 0620 3
C569, C570	ECFT1E682KDY	
C571, C572	ECKD1H471KB	001 103 1551 0
C573, C574	ECFT1E152KDY	001 108 0586 8
C575	ECEA1CU101	001 120 2926 8
C577, C578	ECEA1HU010	001 120 2842 1
C579, C580	ECEA1HU010	001 120 2842 1
C601, C602	ECEA1HU010	001 120 2842 1
C603, C604	ECKD1H102KB	001 103 1414 8
C605, C606	ECEA1AU101	001 120 2830 5
C607, C608 ⚠	ECEA1CU470	001 120 2835 0
C609, C610 ⚠	ECEA1AU471	001 120 3029 8
C611	ECEA1CU221	001 120 2833 2
C613, C614	ECFT1E104KDY	
C651, C652 ⚠	ECEA1CU470	001 120 2835 0
C653	ECEA1CU100	001 120 2905 3
C701 ⚠	ECEA1ES332	001 120 3025 2
C702	ECEA1CU101	001 120 2926 8
C703, C704 ⚠	ECKD1H103PF	001 103 1449 7
C705, C706 ⚠	ECKD1H103PF	001 103 1449 7
C708	ECKD1H103PF	001 103 1449 7
C709	ECEA1VU101	001 120 2929 5
C710	ECEA1CU101	001 120 2926 8
C713	ECKDKC103PF2	001 103 3734 7
C714	ECKD1H102KB	001 103 1414 8
C715	ECEA1CU221	001 120 2833 2
C716	ECFTD223JX	001 108 0333 7
C750	ECEA1HU010	001 120 2842 1
C751	ECEA1CU101	001 120 2926 8
C901	ECKD1H103PF	001 103 1449 7
C902	ECEA25M4R7R	001 120 0838 5
C903	ECKD1H103PF	001 103 1449 7
C904	RCBS1H470JLY	001 103 5628 0
C905	RCBS1H100JLY	001 103 5564 9
C906	ECEA1HUR47	001 120 3249 8
C907	ECCD1H150KC	001 103 0410 6
C908	ECEA0JS331	001 120 2975 9
C909	ECEA1CU100	001 120 2905 3
C910	ECFT1E104KDY	
C911	ECBS1H101JLY	001 103 3502 1
C912	ECEA0JU332	001 120 4671 4
C913	RCBS1H102KBY	001 103 5571 0
C914	ECFT1E104KDY	

■ WIRING CONNECTION DIAGRAM

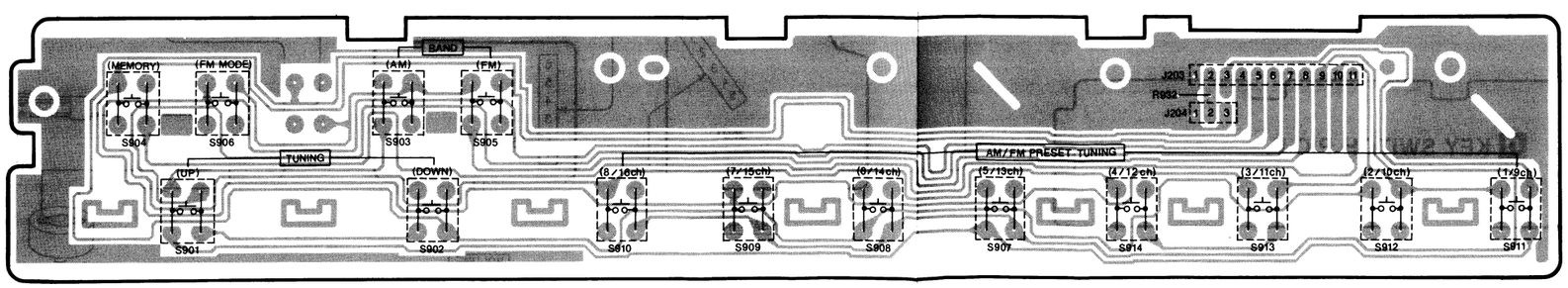


■ PRINTED CIRCUIT BOARDS

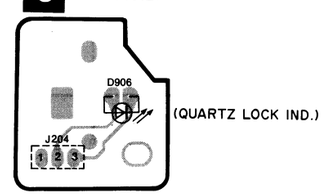
E MAIN P.C.B.



D KEY SWITCH P.C.B.

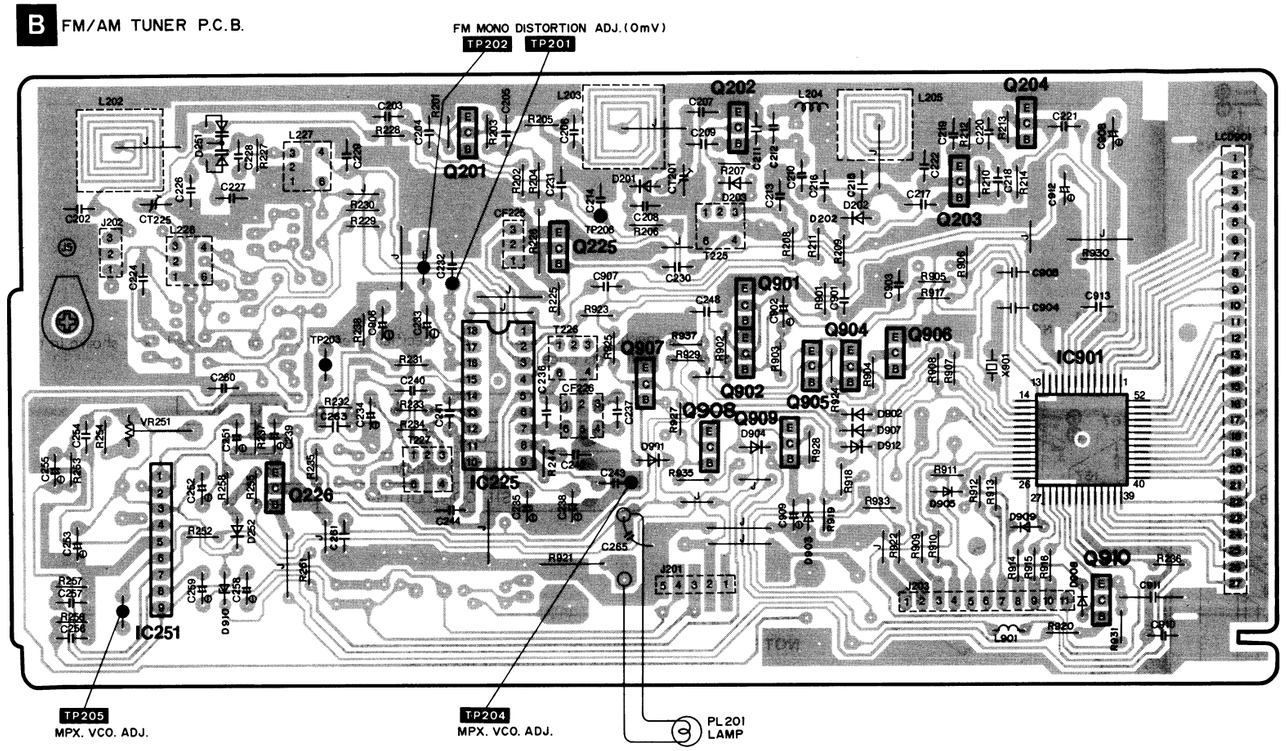


C LED P.C.B.

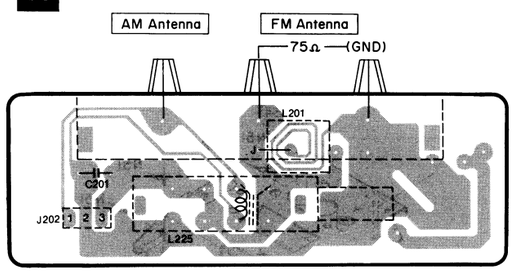


11 12 13 14 15 16 17 18 19

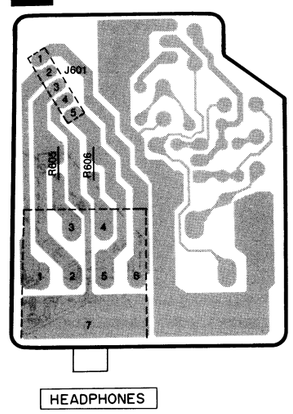
B FM/AM TUNER P.C.B.



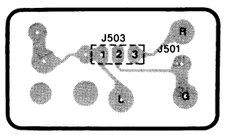
A FM/AM ANT P.C.B.



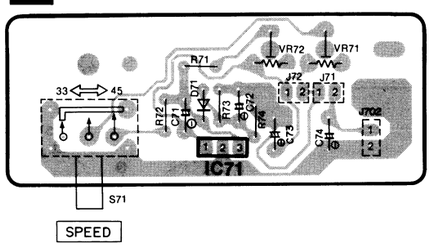
K HEADPHONES P.C.B.



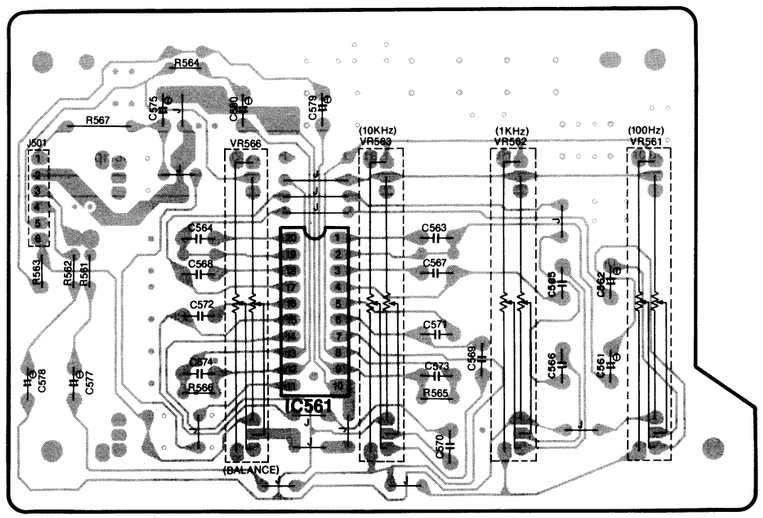
I PHONO P.C.B.



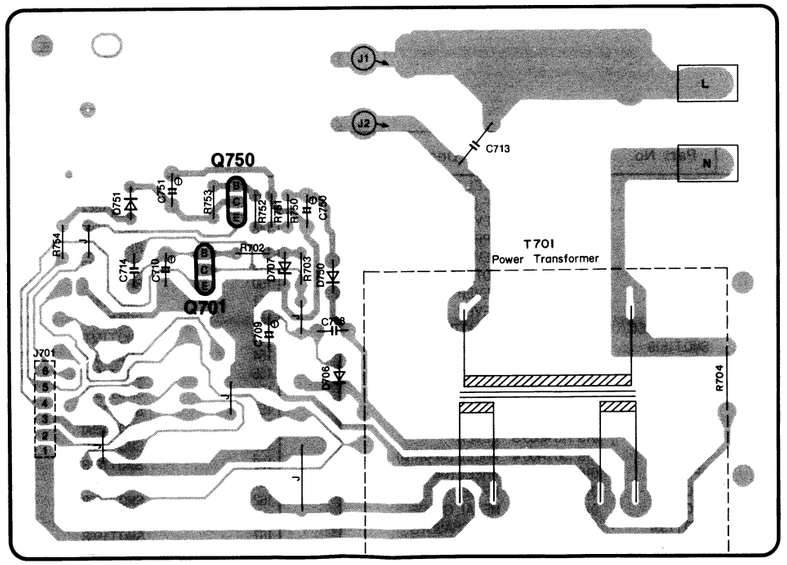
J TURNTABLE DRIVE P.C.B.



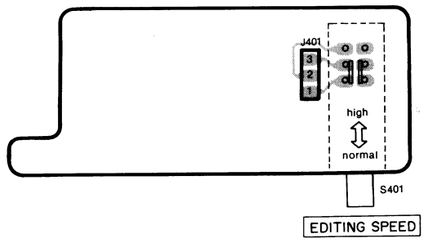
G GRAPHIC EQUALIZER P.C.B.



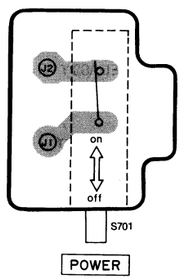
L POWER SUPPLY P.C.B.



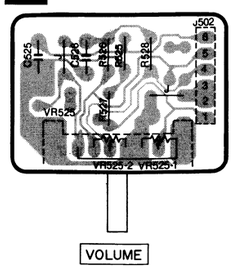
F EDITING P.C.B.



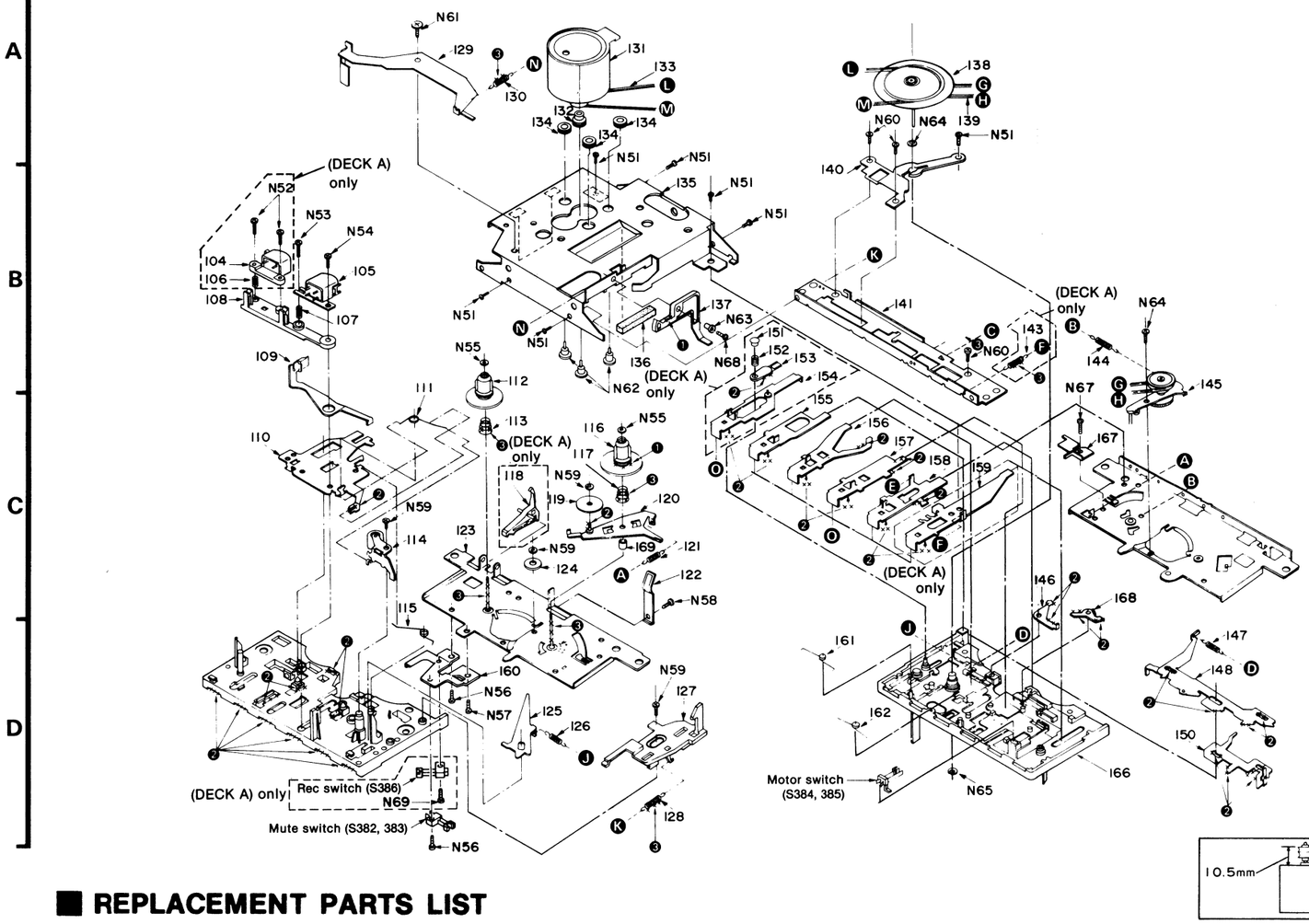
M POWER SWITCH P.C.B.

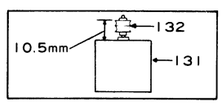


H VOLUME P.C.B.



■ EXPLODED VIEW OF CASSETTE DECK MECHANISM





NOTE

- When changing mechanism parts apply the specified grease to the area marked "xx" shown in the drawing "Mechanical Parts Location".

Ref. No.	PART NAME	PARTS NO.
❶	FLOIL G-311S	SZZOL26
●	FLOIL G-488M	SZZOL28
❷	SILICONE OIL G-40M	SZZOL27

SPECIFICATIONS

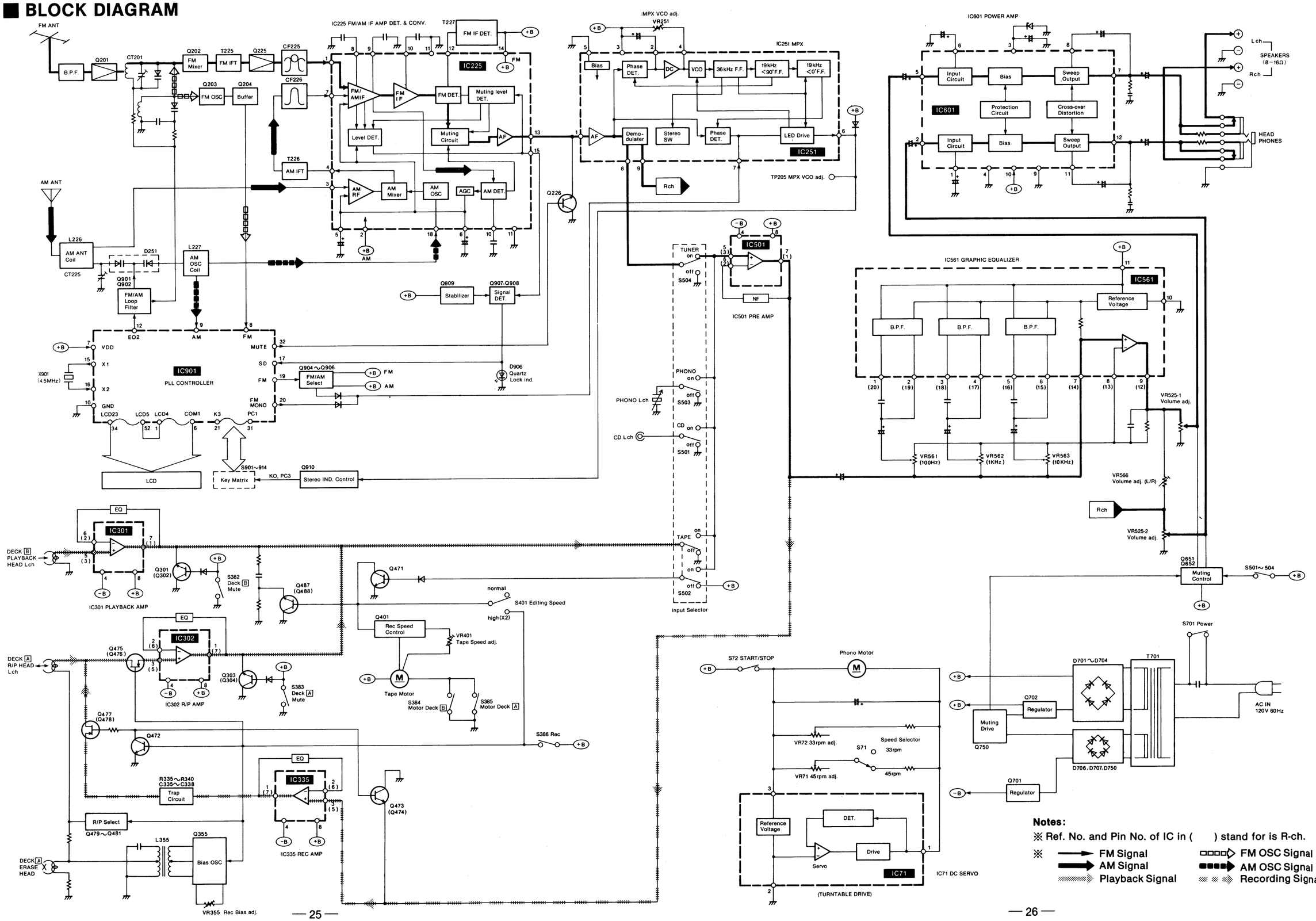
NOTE: The value indicated by the torque tape may fluctuate during torque measurement. In that case, obtain the middle of the values.

Pressure of pressure roller	350 ± 50 g	Wow and flutter; (JIS) * Use test tape .... QZZCWAT	Less than 0.2% (WRMS)
Takeup tension * Use cassette torque meter .... QZZSRKCT	35 ~ 60 g-cm		

■ REPLACEMENT PARTS LIST

Ref. No.	Part No.	Part Code	Description
CASSETTE DECK			
104	SJH94	001 270 0774 7	E HEAD (DECK A)
105	SJH92	001 270 1308 5	R/P HEAD
106	SMQT1469	016 726 0432 2	SPRING
107	RFS447Z	015 726 2437 7	SPRING
108	SMQT1468	016 630 0239 2	HEAD BASE (DECK A)
108	SMQT1670	016 630 1835 4	HEAD BASE (DECK B) Ⓜ
109	SMQT1653	016 630 1747 3	SENSING PLATE
110	SMQT1560	016 630 1674 3	HEAD PANEL (DECK A)
110	SMQT1669	016 630 1836 3	HEAD PANEL (DECK B) Ⓜ
111	SMQT1622	016 726 0767 2	SPRING
112	SMQT1643	016 913 0002 7	SUPPLY REEL ASS'Y
113	SMQT1639	016 726 0776 1	SPRING
114	RFR29Z	015 740 0302 7	ROLLER
115	RFS531Z	015 726 2470 6	SPRING
116	SMQT1637	016 765 0054 9	TAKE UP REEL ASS'Y
117	SMQT1621	016 726 0766 3	SPRING
118	SMQT1605	016 718 3302 5	REC LEVER (DECK A)
119	RFG61Z	015 745 0849 2	GEAR
120	SMQT1658	016 630 1745 5	PLATE
121	RFS450Z	015 726 2440 2	SPRING
122	RFS467Z	015 727 0783 5	PACK SPRING
123	SMQT1564	016 630 1678 9	REEL BASE ASS'Y
124	SMQT1620	016 745 0182 4	FF GEAR
125	RFY549Z	015 718 3506 3	LEVER
126	RFS453Z	015 726 2442 0	SPRING
127	SMQT1569	016 718 3278 8	LEVER
128	RFS454Z	015 726 2443 9	COIL SPRING
129	SMQT1659	016 718 3347 2	LEVER
130	RFY585Z	015 718 4091 1	LEVER
131	MM16H2LWSC	002 310 2558 6	DC MOTOR Ⓜ
132	SMQT1619	016 741 0073 8	PULLEY
133	SMQT1652	016 754 0058 6	ANGULAR BELT
134	RF127Z	015 653 0531 2	MOTOR RUBBER
135	SMQT1651	016 650 5255 0	ANGLE
136	SMQT1579	016 655 0614 2	FELT
137	RFY582Z	015 718 4089 5	LEVER
138	RFF39Z	015 756 0406 4	WHEEL (DECK B)
138	RFF40Z	015 756 0407 3	WHEEL (DECK A)
139	SMQT1563	016 752 0118 1	RF BELT
140	SMQT1601	016 641 0239 1	METAL GUIDE
141	SMQT1557	016 630 1675 2	SUB CHASSIS
142	RFS530Z	015 726 2469 9	COIL SPRING
143	SMQT1465	016 726 0434 0	SPRING (DECK A)
144	RFS532Z	015 728 1316 9	SPRING
145	SMQT1654	016 717 0251 6	ARM
146	SMQT1555	016 718 3270 6	REW LEVER
147	RFS466Z	015 726 2449 3	SPRING
148	SMQT1548	016 630 1676 1	PUSH BUTTON ACTUATOR
150	RFY541Z	016 630 1761 5	ANGLE
151	SMQT1463	016 643 0597 2	STOPPER
152	RFS459Z	015 726 2444 8	SPRING
153	SMQT1556	016 718 3269 9	LEVER
154	SMQT1554	016 718 3271 5	PAUSE BUTTON LEVER
155	SMQT1553	016 718 3272 4	STOP BUTTON LEVER
156	SMQT1552	016 718 3273 3	FF BUTTON LEVER
157	SMQT1551	016 718 3274 2	REW BUTTON LEVER
158	SMQT1550	016 718 3275 1	PLAY BUTTON LEVER
159	SMQT1580	016 718 3279 7	LEVER, REC (DECK A)
160	SMQT1618	016 630 1708 0	ANGLE
161	RFS462Z	015 728 1267 1	SPRING
162	SMQT1558	016 726 0727 0	SPRING
166	SMQT1547	016 630 1679 8	MAIN BASE ASS'Y
167	SMQT1568	016 650 5145 5	ANGLE
168	SMQT1628	016 643 0940 7	P.R STOPPER
169	SMQT1641	016 643 0939 0	COLLER
SCREWS, WASHERS & NUTS			
N51	XTN2+4H	005 501 2158 1	SCREW
N52	XYN2D8	005 503 0922 7	SCREW
N53	XYN2DB7	005 503 0920 9	SCREW
N54	XYN2D7	005 501 0921 8	SCREW
N55	RFN142Z	005 513 3262 2	WASHER
N56	XTN2+C5	005 501 3458 8	SCREW
N57	XTN2+5H	005 501 2162 5	SCREW
N58	XTN2+3H	005 501 4724 5	SCREW
N59	RFN149Z	005 513 3269 5	SCREW
N59	SMQT1537	005 500 5082 7	SCREW
N60	XTB2+5G	005 501 2615 7	SCREW
N61	RFE239Z	005 500 5057 8	SCREW
N62	SMQ4918	016 643 0446 6	SCREW
N63	SMQT1617	016 643 0918 5	COLOR
N64	RFN153Z	005 513 3274 8	WASHER
N64	SMQT1624	005 500 5729 1	SCREW
N65	RFN123Z	005 513 3685 3	WASHER
N67	XTN2+6G	005 501 1622 2	SCREW
N68	XTN2+6H	005 501 3459 7	SCREW
N69	XYN2+C5	005 500 1291 6	SCREW
N70	XSN2+6	005 500 1297 0	SCREW

■ BLOCK DIAGRAM



Notes:

※ Ref. No. and Pin No. of IC in ( ) stand for is R-ch.

※ FM Signal / AM Signal / Playback Signal / FM OSC Signal / AM OSC Signal / Recording Signal

■ SCHEMATIC DIAGRAM

(This schematic diagram may be modified at any time with the development of new technology.)

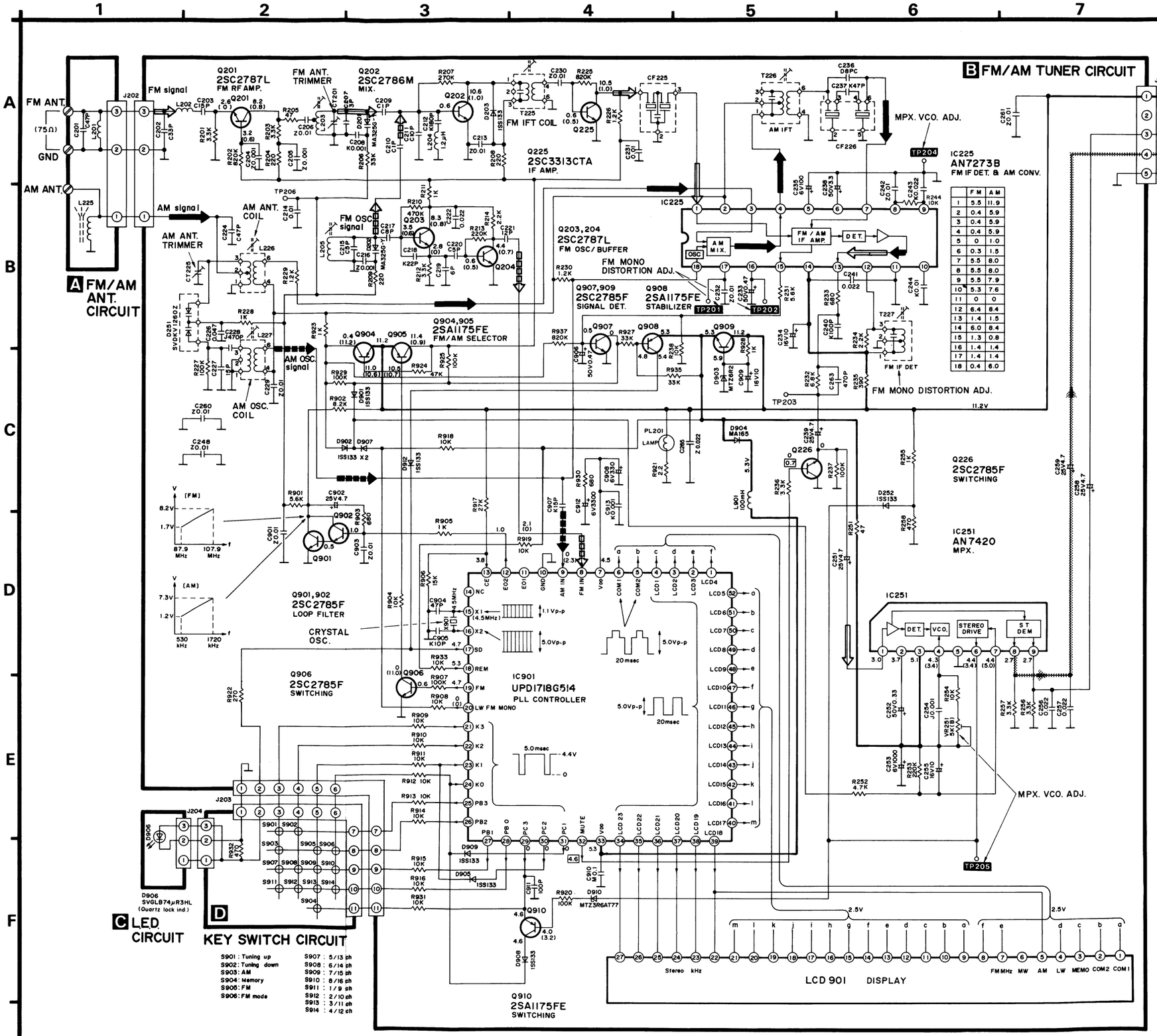
Notes:

- **S71** : Player speed selector switch in "**33-1/3 rpm**" position.
- **S72** : Player start/stop switch in "**stop**" position.
- **S382** : DECK B muting switch in "**off**" position.
- **S383** : DECK A muting switch in "**off**" position.
- **S384** : DECK B motor switch in "**off**" position.
- **S385** : DECK A motor switch in "**off**" position.
- **S386** : Auto rec mute switch in "**off**" position.
- **S401** : Editing switch in "**off**" position.
- **S501～504** : Input selector switch in "**Tuner**" position.
  S501: CD, **S502**: tape
  S503: phono, **S504**: tuner
- **S701** : Power switch in "**on**" position.
- **S901, 902** : Tuning (up/down) switch.
  [**S901**: up, **S902**: down]
- **S903** : Band (AM) switch.
- **S904** : Memory switch.
- **S905** : Band (FM) switch.
- **S906** : FM mode selector switch.
- **S907～914** : Preset tuning switch.
  S907: CH5/13, **S908**: CH6/14, **S909**: CH7/15,
  S910: CH8/16, **S911**: CH1/9, **S912**: CH2/10,
  S913: CH3/11, **S914**: CH4/12

- Positive voltage lines
- Negative voltage lines
- AM OSC signal
- AM signal
- FM OSC signal
- FM signal
- PB signal
- AF signal
- Rec signal

- Important safety notice:
  Components identified by ⚠ mark have special characteristics important for safety. When replacing any of these components, use only manufacturer's specified parts. Indicated voltage values are standard values for the unit measured by the DC electronic circuit tester (high-impedance) with the chassis taken as standard. Therefore, there may exist some errors in the voltage values, depending on internal impedance of the DC circuit tester.
- All voltage values shown in circuitry are DC voltage in FM signal (Monaural signal) reception mode.
  Figure in ( ) Stand for DC-voltage in MW signal reception mode
  Figure in [ ] Stand for DC-voltage in LW signal reception mode
  Figure in (( )) Stand for DC-voltage in playback signal reception mode
  Figures in 《 》Stand for DC-voltage in REC signal reception mode

∗**Caution!**
IC and LSI are sensitive to static electricity.
Secondary trouble can be prevented by taking care during repair.
∗Cover the parts boxes made of plastics with alminum foil.
∗Ground the soldering iron.
∗Put a conductive mat on the work table.
∗Do not touch the legs of IC or LSI with the fingers directly.



E MAIN CIRCUIT

J201 · PLAYBACK signal · DECK B · PLAYBACK HEAD · DECK A · R/P HEAD · DECK A · ERASE HEAD · BIAS OSC. ADJ./ ERASE CURRENT ADJ. · REC. BIAS ADJ. (L ch) · REC. BIAS ADJ. (R ch)

IC301 AN6558F PLAYBACK AMP.

Q301~304 2SD1302-R SWITCHING MUTING "ON"

Q487,488 2SC2785F SWITCHING HIGH SPEED "ON"

Q479,480 2SC2784PFE R/P SELECT

Q481 2SA1175FE R/P SELECT

IC302 AN6558F R/P AMP.

Q473,474 2SD1302-R SWITCHING REC. "OFF"

Q475,476 2SJ105GR SWITCHING REC. "OFF"

Q472 2SC2785F SWITCHING REC. "ON"

Q477,478 2SJ105GR SWITCHING REC. "ON"

Q471 2SC2785F SWITCHING TAPE SW "ON"

IC335 AN6553F REC. AMP.

Q355 2SD1302-R BIAS OSC.

Q401 2SA1175FE SPEED CONTROL

REC. signal

IC501 AN6553F PRE AMP.

S501 on off (CD) · S502 on off (TAPE) · S503 on off (PHONO) · S504 on off (TUNER)

IC601 AN7147N POWER AMP.

I PHONO CIRCUIT

Voltage of IC71

	①	②	③
33 rpm	6.5	0	7.7
45 rpm	4.9	0	6.1

J503 · CARTRIDGE · Lch · Rch · CD

H VOLUME CIRCUIT

VR525-1 100K(A) (VOLUME) · VR525-2 100K(A) (VOLUME) · J502

Q651,652 2SD1302-R MUTING CONTROL

F EDITING CIRCUIT

J401 · S401 High ⇔ Normal · EDITING SPEED X2

J402 · CASSETTE MOTOR · S386 (REC) · S382 (DECK B MUTING) · S383 (DECK A MUTING) · S384 (DECK B MOTOR) · S385 (DECK A MOTOR)

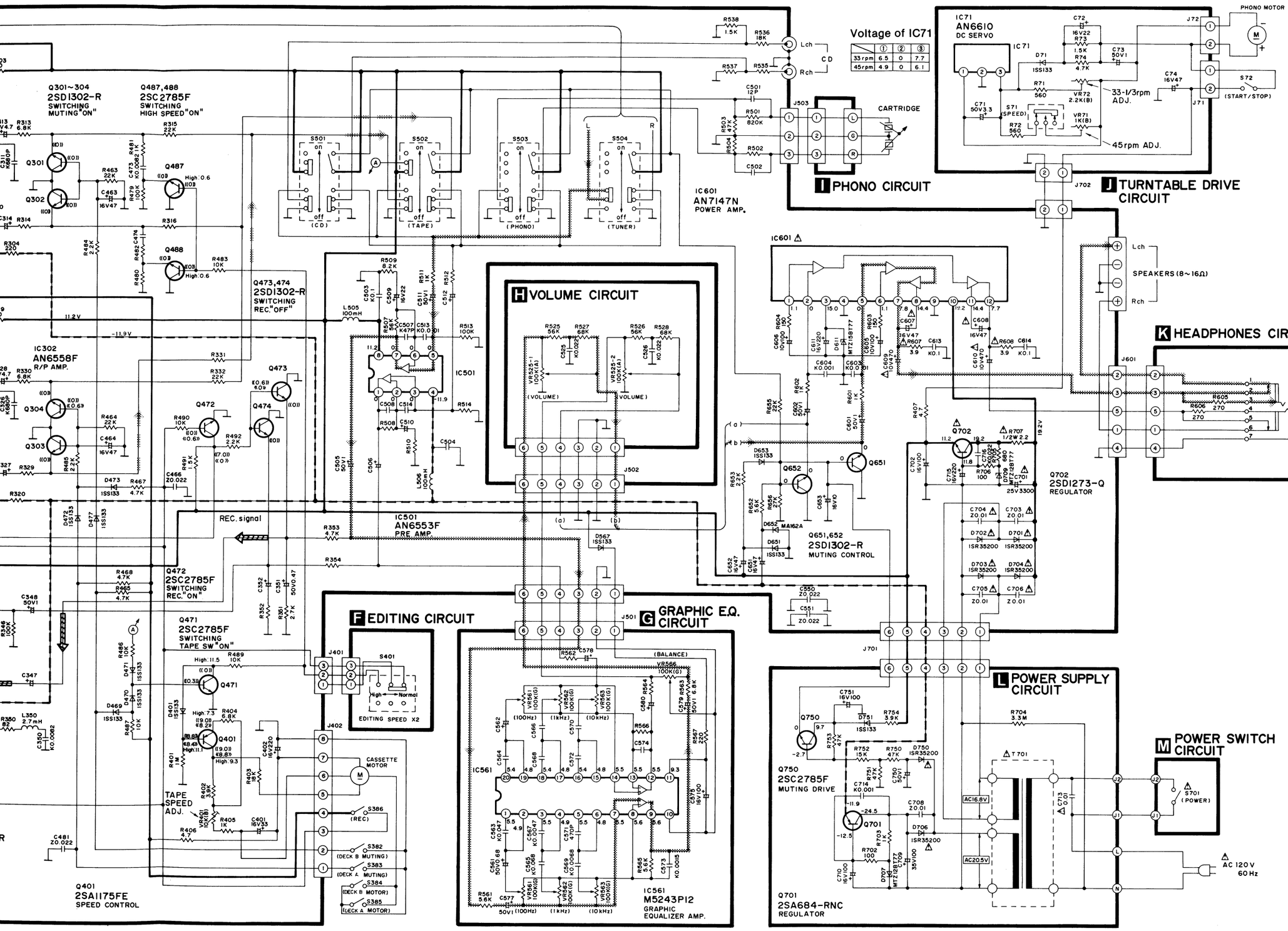
G GRAPHIC E.Q. CIRCUIT

J501 · J701 · VR566 100K(G) (BALANCE) · VR561 100K(G) (100Hz) · VR562 100K(G) (1kHz) · VR563 100K(G) (10kHz)

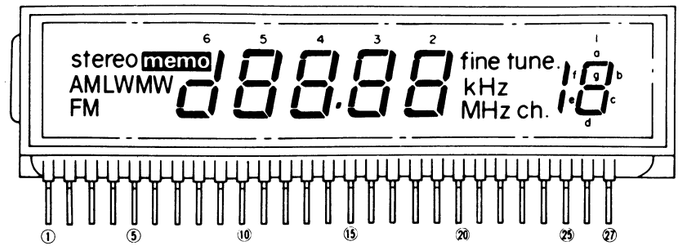
IC561 M5243P12 GRAPHIC EQUALIZER AMP.

Q750 2SC2785F MUTING DRIVE

Q701 2SA684-RNC REGULATOR


Q301~304
2SD1302-R
SWITCHING
MUTING "ON"
Q487,488
2SC2785F
SWITCHING
HIGH SPEED "ON"
S501 on off (CD)
S502 on off (TAPE)
S503 on off (PHONO)
S504 on off (TUNER)
IC601
AN7147N
POWER AMP.
Voltage of IC71
33rpm 6.5 0 7.7
45rpm 4.9 0 6.1
Lch
Rch
CD
CARTRIDGE
J503
I PHONO CIRCUIT
IC71
AN6610
DC SERVO
33-1/3rpm ADJ.
45rpm ADJ.
S72 (START/STOP)
PHONO MOTOR
J702
J TURNTABLE DRIVE CIRCUIT
SPEAKERS (8~16Ω)
K HEADPHONES CIRCUIT
HEAD PHONES
H VOLUME CIRCUIT
IC501
AN6553F
PRE AMP.
REC. signal
IC302
AN6558F
R/P AMP.
Q472
2SC2785F
SWITCHING
REC. "ON"
Q473,474
2SD1302-R
SWITCHING
REC. "OFF"
Q651,652
2SD1302-R
MUTING CONTROL
Q702
2SD1273-Q
REGULATOR
F EDITING CIRCUIT
S401
EDITING SPEED X2
Q471
2SC2785F
SWITCHING
TAPE SW "ON"
Q401
2SA1175FE
SPEED CONTROL
TAPE SPEED ADJ.
CASSETTE MOTOR
S386 (REC)
S382 (DECK B MUTING)
S383 (DECK A MUTING)
S384 (DECK B MOTOR)
S385 (DECK A MOTOR)
G GRAPHIC E.Q. CIRCUIT
IC561
M5243P12
GRAPHIC EQUALIZER AMP.
L POWER SUPPLY CIRCUIT
Q750
2SC2785F
MUTING DRIVE
Q701
2SA684-RNC
REGULATOR
M POWER SWITCH CIRCUIT
S701 (POWER)
AC 120V 60Hz

■ DESCRIPTION OF LCD PANEL

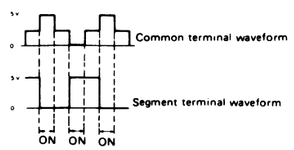


Common terminal – ①, ② Segment terminal – ③ ~ ㉗

No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14
COM 1	COM 1	—	MEMO	—	AM	—	FM,MHz	6b	5f	5e	5d	5a	4f	4e
COM 2	—	COM 2	—	LW	—	MW	6d,e,g	6c	5b	5g	5c	—	4b	4g

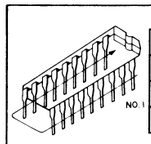
No.	15	16	17	18	19	20	21	22	23	24	25	26	27
COM 1	4d	4a	3f	3e	3d	3a	2a,c,d,f	kHz	stereo	ch	1d	1e	1f
COM 2	4c	■	3b	3g	3c	2b,e	2g	fine tune	/	1a	1c	1g	1b

Lighting timing:
It turns on when the difference in voltage between common and segment terminals is 5V (VDD).

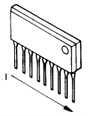


■ TERMINAL GUIDE OF IC'S, TRANSISTORS AND DIODES

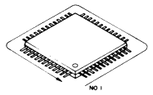
AN6553F 8 Pin
AN6558F 8 Pin
AN7273B 18 Pin
M5243P12 20 Pin



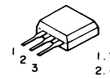
AN7420 9 Pin



UPD1718G514 52 Pin

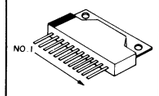


AN6610

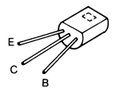


1. Vin
2. GND
3. Vout

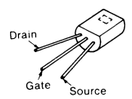
AN7147N 12 Pin

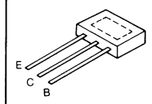


2SA684,
2SD1302



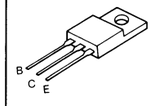
2SJ105



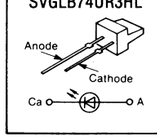


2SA1175, 2SC2784,
2SC2785, 2SC2786,
2SC2787L, 2SC3312,
2SC3313

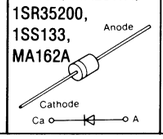
2SD1273

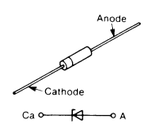


SVGLB74UR3HL



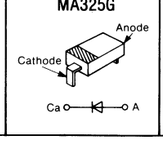
MA165, MA29WA,
1SR35200,
1SS133,
MA162A



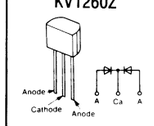


MTZ8R2BT77,
MTZ15BT77,
MTZ12BT77,
MTZ6R2BT77,
MTZ3R6AT77

MA325G



KV1260Z



■ REPLACEMENT PARTS LIST

Notes: * Important safety notice:
Components identified by ⚠ mark have special characteristics important for safety. When replacing any of these components use only manufacturer's specified parts.
* Bracketed indications in Ref. No. columns specify the area.
Parts without these indications can be used for all areas.

* Ⓜ mark stands for that the parts are supplied in MESA.

Ref. No.	Part No.	Part Code	Description
INTEGRATED CIRCUITS			
IC71	AN6610	001 060 0277 9	I.C.
IC225	AN7273B	001 060 4158 9	I.C.
IC251	AN7420	001 060 4196 3	I.C.
IC301, IC302	AN6558F	001 060 4009 1	I.C.
IC335, IC501	AN6553F	001 060 4207 7	I.C.
IC561	M5243P12	001 061 4585 9	I.C.
IC601 ⚠	AN7147N	001 061 0919 3	I.C.
IC901	UPD1718G514	001 061 1045 4	I.C.
TRANSISTORS			
Q201	2SC2787L	001 030 2508 3	TRANSISTOR
Q202	2SC2786M	001 030 5078 2	TRANSISTOR
Q203, Q204	2SC2787L	001 030 2508 3	TRANSISTOR
Q225	2SC3313CTA	001 030 6020 6	TRANSISTOR
Q226	2SC2785F	001 030 5076 4	TRANSISTOR
Q301, Q302	2SD1302-R	001 030 2520 7	TRANSISTOR
Q303, Q304	2SD1302-R	001 030 2520 7	TRANSISTOR
Q355	2SD1302-R	001 030 2520 7	TRANSISTOR
Q401	2SA1175FE	001 030 5075 5	TRANSISTOR
Q471, Q472	2SC2785F	001 030 5076 4	TRANSISTOR
Q473, Q474	2SD1302-R	001 030 2520 7	TRANSISTOR
Q475, Q476	2SJ105GR	001 030 2827 1	TRANSISTOR
Q477, Q478	2SJ105GR	001 030 2827 1	TRANSISTOR
Q479, Q480	2SC2784PFE	001 030 6019 9	TRANSISTOR
Q481	2SA1175FE	001 030 5075 5	TRANSISTOR
Q487, Q488	2SC2785F	001 030 5076 4	TRANSISTOR
Q651, Q652	2SD1302-R	001 030 2520 7	TRANSISTOR
Q701	2SA684-RNC	001 030 0352 3	TRANSISTOR
Q702 ⚠	2SD1273-Q	001 030 2653 5	TRANSISTOR
Q750, Q901	2SC2785F	001 030 5076 4	TRANSISTOR
Q902	2SC2785F	001 030 5076 4	TRANSISTOR
Q904, Q905	2SA1175FE	001 030 5075 5	TRANSISTOR
Q906, Q907	2SC2785F	001 030 5076 4	TRANSISTOR
Q908	2SA1175FE	001 030 5075 5	TRANSISTOR
Q909	2SC2785F	001 030 5076 4	TRANSISTOR
Q910	2SA1175FE	001 030 5075 5	TRANSISTOR
DIODES			
D71	1SS133	001 032 3324 5	DIODE
D201, D202	MA325G-Y	001 032 7205 5	ZENER
D203	1SS133	001 032 3324 5	DIODE
D251	KV1260Z	001 032 7237 7	DIODE
D252	1SS133	001 032 3324 5	DIODE
D355	MA29WA	001 032 7250 0	DIODE
D401, D469	1SS133	001 032 3324 5	DIODE
D470, D471	1SS133	001 032 3324 5	DIODE
D472, D473	1SS133	001 032 3324 5	DIODE
D474 ⚠	SVD1SR35200A	001 032 3951 4	RECTIFIER
D476	MTZ8R2B	001 032 4210 0	DIODE
D477, D567	1SS133	001 032 3324 5	DIODE
D611	MTZ15BT77	001 033 0166 8	DIODE Ⓜ
D651	1SS133	001 032 3324 5	DIODE
D652	MA162A	001 032 0493 1	DIODE
D653	1SS133	001 032 3324 5	DIODE
D701, D702 ⚠	SVD1SR35200A	001 032 3951 4	RECTIFIER
D703, D704 ⚠	SVD1SR35200A	001 032 3951 4	RECTIFIER
D706 ⚠	SVD1SR35200A	001 032 3951 4	RECTIFIER
D707, D709	MTZ12BT77	001 033 0165 9	DIODE Ⓜ
D750 ⚠	SVD1SR35200A	001 032 3951 4	RECTIFIER
D751, D901	1SS133	001 032 3324 5	DIODE
D902	1SS133	001 032 3324 5	DIODE
D903	MTZ6R2BT77	001 032 8085 1	DIODE
D904	MA165	001 032 0494 0	DIODE
D906	SVGLB74UR3HL	001 032 7553 8	L.E.D
D907, D908	1SS133	001 032 3324 5	DIODE
D909	1SS133	001 032 3324 5	DIODE
D910	MTZ3R6AT77	001 033 0167 7	DIODE Ⓜ
D912	1SS133	001 032 3324 5	DIODE
VARIABLE RESISTORS			
VR71	QVNB3A00B102	001 180 1676 5	VARIABLE RESISTOR
VR72	QVNB3A00B222	001 180 1654 1	VARIABLE RESISTOR
VR251	SVNAA53B2-Q	001 180 1627 4	VARIABLE RESISTOR
VR355	QVNB3A00B223	001 180 1618 5	VARIABLE RESISTOR
VR401	QVNB3A00B103	001 180 1684 5	VARIABLE RESISTOR
VR525	EWCXTAF20A15	001 174 5407 4	VOLUME
VR561, VR562	EWATA3X0AG15	001 174 8660 1	GRAPHIC EQUALIZER
VR563	EWATA3X0AG15	001 174 8660 1	GRAPHIC EQUALIZER
VR566	EWATJ3X0AG15	001 174 8982 6	BALANCE
VARIABLE CAPACITORS			
CT201	SVCVCT54A	001 142 0658 5	TRIMMER Ⓜ
CT225	SVCVCT54C	001 142 0659 4	TRIMMER Ⓜ
COILS AND TRANSFORMERS			
L204	ELEPK1R2MA	001 211 0621 4	CHOKE COIL
L225	SLF6C1-10	001 214 1576 3	ANTENNA COIL
L226	SLA2B1-M	001 211 1077 2	ANTENNA COIL
L227	SL02B7-M	001 211 0659 4	OSCILLATOR COIL
L350, L351	SLQX272-1YT	001 211 0649 2	CHOCK COIL
L355	SL09Z15-M	001 211 4091 2	OSC COIL Ⓜ
L505	ELEPK101KA	001 211 0855 8	CHOCK COIL
L506	ELEPH101KA	001 211 2987 9	CHOKE COIL
L901	ELEXT101KA	001 211 3878 9	COIL
T225	SL14B108-M	001 211 2792 8	I.F. TRANSFORMER
T226	SL12B101-M	001 211 0654 5	I.F.TRANSFORMER
T227	SL14B519-Z	001 215 2839 0	I.F.TRANSFORMER
T701 ⚠	SLT5L275-K	001 202 8991 0	POWER TRANSFORMER Ⓜ
FILTERS			
CF225	SVFE107MS2-A	001 241 0777 7	CERAMIC FILTER
CF226	SVFSFZ450F7L	001 241 0429 4	CERAMIC FILTER
OSCILLATORS			
X901	SVQ43U452-D	001 250 1506 3	CRYSTAL OSC
DISPLAYS			
LCD90	SALHLC9225-9	001 080 0308 7	DISPLAY
LAMPS			
PL201	XAMR78S250	002 351 0397 4	LAMP
SWITCHES			
S71	SSS167	003 431 3107 3	SWITCH SLIDE
S72	SSP66	003 434 0543 4	SWITCH
S382, S383	SMQT1466	003 434 0907 6	LEAF SWITCH
S384, S385	SMQT1451	003 434 0905 8	LEAF SWITCH
S386	SMQT1615	003 434 0993 2	LEAF SWITCH
S401	SSH1194	003 435 6157 1	PUSH SWITCH
S501, S502	SSH4109	003 435 6248 9	SWITCH
S503, S504	SSH4109	003 435 6248 9	SWITCH
S701 ⚠	SSH1071	003 435 3185 9	SWITCH
S901, S902	SSG13	003 435 2951 9	SW
S903, S904	SSG13	003 435 2951 9	SW
S905, S906	SSG13	003 435 2951 9	SW
S907, S908	SSG13	003 435 2951 9	SW
S909, S910	SSG13	003 435 2951 9	SW
S911, S912	SSG13	003 435 2951 9	SW
S913, S914	SSG13	003 435 2951 9	SW

Ref. No.	Part N
CABINET AND CHASSIS	
1	SGXGD16-
1-1	QBP2006A
2	SGXGD16-
2-1	QBP2006A
3	SBN1203
4	SBD118
5	SGYGD16-
6	SNE4060
7	SBC666-1
8	SBC918
9	SMQ30030
10	SMQ4096
11	SMQ60019
12	SUW2995
13	SBCGW7CD
14	SBC916
15	SBC917
16	SBC919
17	SBC920
18	SJJ138
20	SMP409
21	SDU296
22	SUW3048
23	SUW3046
24	SMC6437
25	SMC6439
26	SHR9094
27	SKUGD16-
28	SKM7621U
29	SHS3276
30	SJF4442
31	SJF3250
32	SJF4231
33	SUW3045
34	SGPGD16-
35 ⚠	SJA174K
36	SHR129
37	SHR301
38	SJT783
39	SJS5331
39	SJS5523
39	SJS5811
40	SJS5215
40	SJT3213
40	SJT3319
40	SJT3511
40	SJT3809
41	SJT785
42	SJS5337
43	SJT30540
43	SJT30640
SCREWS, WASHERS & NUTS	
N1	SNE4021
N2	SNE2120
N3	XTB3+8G
N4	XTB3+8JF
N5	XTB3+8JF
N6	XTB3+10G
N7	XTB3+10G
N8	XTB4+8F
N9	XTB4+12J
N10	XTW3+10T
N11	XTW3+10T
N12	XTWS3+10
N13	XTB3+8J

■ REPLACEMENT PARTS LIST

Notes: * Important safety notice:
Components identified by ⚠ mark have special characteristics important for safety. When replacing any of these components use only manufacturer's specified parts.
* Bracketed indications in Ref. No. columns specify the area.
Parts without these indications can be used for all areas.

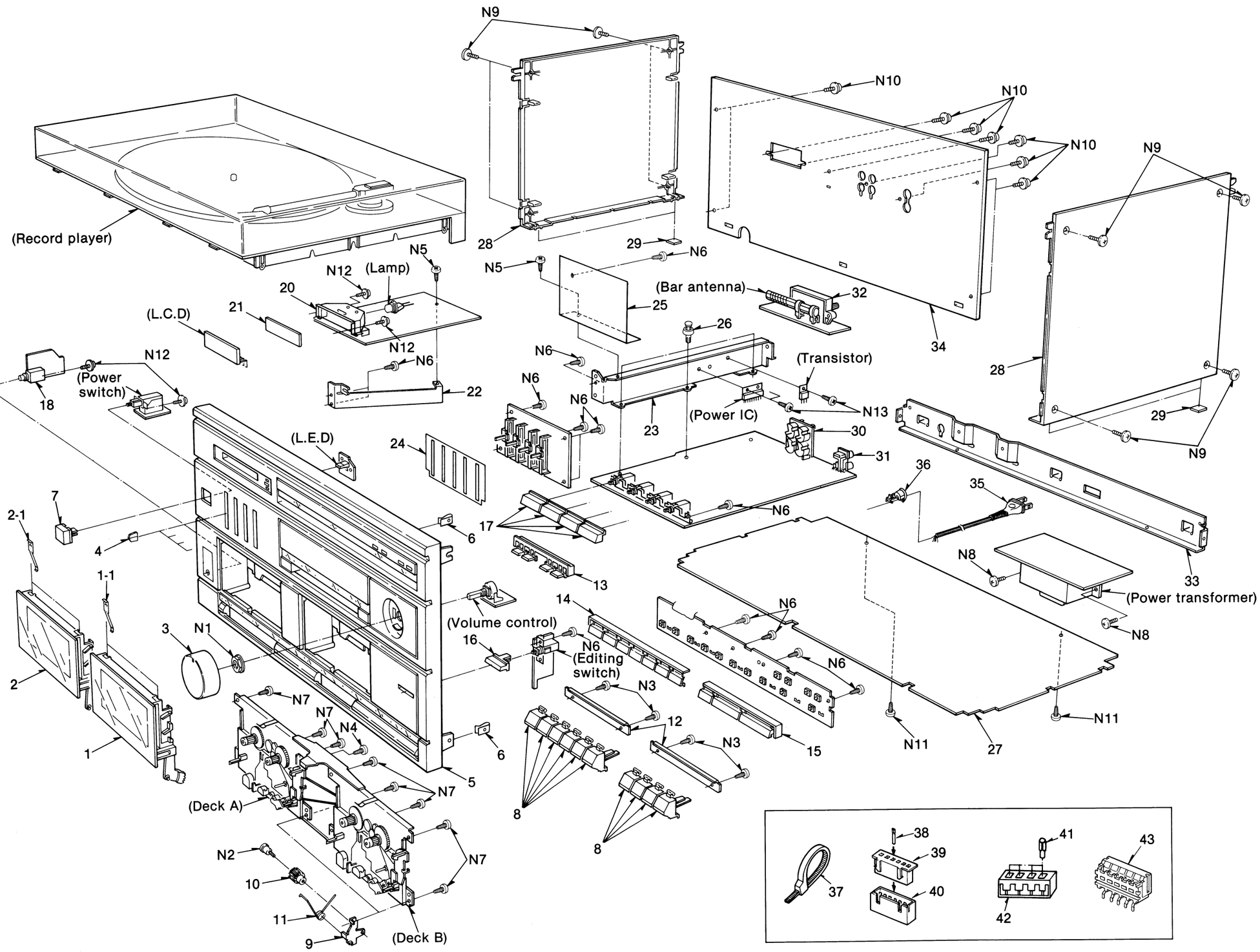
* Ⓜ mark stands for that the parts are supplied in MESA.

Ref. No.	Part No.	Part Code	Description	
INTEGRATED CIRCUITS				
IC71	AN6610	001 060 0277 9	I.C.	
IC225	AN7273B	001 060 4158 9	I.C.	
IC251	AN7420	001 060 4196 3	I.C.	
IC301, IC302	AN6558F	001 060 4009 1	I.C.	
IC335, IC501	AN6553F	001 060 4207 7	I.C.	
IC561	M5243P12	001 061 4585 9	I.C.	
IC601 ⚠	AN7147N	001 061 0919 3	I.C.	
IC901	UPD1718G514	001 061 1045 4	I.C.	
TRANSISTORS				
Q201	2SC2787L	001 030 2508 3	TRANSISTOR	
Q202	2SC2786M	001 030 5078 2	TRANSISTOR	
Q203, Q204	2SC2787L	001 030 2508 3	TRANSISTOR	
Q225	2SC3313CTA	001 030 6020 6	TRANSISTOR	
Q226	2SC2785F	001 030 5076 4	TRANSISTOR	
Q301, Q302	2SD1302-R	001 030 2520 7	TRANSISTOR	
Q303, Q304	2SD1302-R	001 030 2520 7	TRANSISTOR	
Q355	2SD1302-R	001 030 2520 7	TRANSISTOR	
Q401	2SA1175FE	001 030 5075 5	TRANSISTOR	
Q471, Q472	2SC2785F	001 030 5076 4	TRANSISTOR	
Q473, Q474	2SD1302-R	001 030 2520 7	TRANSISTOR	
Q475, Q476	2SJ105GR	001 030 2827 1	TRANSISTOR	
Q477, Q478	2SJ105GR	001 030 2827 1	TRANSISTOR	
Q479, Q480	2SC2784PFE	001 030 6019 9	TRANSISTOR	
Q481	2SA1175FE	001 030 5075 5	TRANSISTOR	
Q487, Q488	2SC2785F	001 030 5076 4	TRANSISTOR	
Q651, Q652	2SD1302-R	001 030 2520 7	TRANSISTOR	
Q701	2SA684-RNC	001 030 0352 3	TRANSISTOR	
Q702 ⚠	2SD1273-Q	001 030 2653 5	TRANSISTOR	
Q750, Q901	2SC2785F	001 030 5076 4	TRANSISTOR	
Q902	2SC2785F	001 030 5076 4	TRANSISTOR	
Q904, Q905	2SA1175FE	001 030 5075 5	TRANSISTOR	
Q906, Q907	2SC2785F	001 030 5076 4	TRANSISTOR	
Q908	2SA1175FE	001 030 5075 5	TRANSISTOR	
Q909	2SC2785F	001 030 5076 4	TRANSISTOR	
Q910	2SA1175FE	001 030 5075 5	TRANSISTOR	
DIODES				
D71	1SS133	001 032 3324 5	DIODE	
D201, D202	MA325G-Y	001 032 7205 5	ZENER	
D203	1SS133	001 032 3324 5	DIODE	
D251	KV1260Z	001 032 7237 7	DIODE	
D252	1SS133	001 032 3324 5	DIODE	
D355	MA29WA	001 032 7250 0	DIODE	
D401, D469	1SS133	001 032 3324 5	DIODE	
D470, D471	1SS133	001 032 3324 5	DIODE	
D472, D473	1SS133	001 032 3324 5	DIODE	
D474 ⚠	SVD1SR35200A	001 032 3951 4	RECTIFIER	
D476	MTZ8R2B	001 032 4210 0	DIODE	
D477, D567	1SS133	001 032 3324 5	DIODE	
D611	MTZ15BT77	001 033 0166 8	DIODE	Ⓜ
D651	1SS133	001 032 3324 5	DIODE	
D652	MA162A	001 032 0493 1	DIODE	
D653	1SS133	001 032 3324 5	DIODE	
D701, D702 ⚠	SVD1SR35200A	001 032 3951 4	RECTIFIER	
D703, D704 ⚠	SVD1SR35200A	001 032 3951 4	RECTIFIER	
D706 ⚠	SVD1SR35200A	001 032 3951 4	RECTIFIER	
D707, D709	MTZ12BT77	001 033 0165 9	DIODE	Ⓜ
D750 ⚠	SVD1SR35200A	001 032 3951 4	RECTIFIER	
D751, D901	1SS133	001 032 3324 5	DIODE	
D902	1SS133	001 032 3324 5	DIODE	
D903	MTZ6R2BT77	001 032 8085 1	DIODE	
D904	MA165	001 032 0494 0	DIODE	
D906	SVGLB74UR3HL	001 032 7553 8	L.E.D	
D907, D908	1SS133	001 032 3324 5	DIODE	
D909	1SS133	001 032 3324 5	DIODE	
D910	MTZ3R6AT77	001 033 0167 7	DIODE	Ⓜ
D912	1SS133	001 032 3324 5	DIODE	
VARIABLE RESISTORS				
VR71	QVNB3A00B102	001 180 1676 5	VARIABLE RESISTOR	
VR72	QVNB3A00B222	001 180 1654 1	VARIABLE RESISTOR	
VR251	SVNAA53B2-Q	001 180 1627 4	VARIABLE RESISTOR	
VR355	QVNB3A00B223	001 180 1618 5	VARIABLE RESISTOR	
VR401	QVNB3A00B103	001 180 1684 5	VARIABLE RESISTOR	
VR525	EWCXTAF20A15	001 174 5407 4	VOLUME	
VR561, VR562	EWATA3X0AG15	001 174 8660 1	GRAPHIC EQUALIZER	
VR563	EWATA3X0AG15	001 174 8660 1	GRAPHIC EQUALIZER	
VR566	EWATJ3X0AG15	001 174 8982 6	BALANCE	
VARIABLE CAPACITORS				
CT201	SVCVCT54A	001 142 0658 5	TRIMMER	Ⓜ
CT225	SVCVCT54C	001 142 0659 4	TRIMMER	Ⓜ
COILS AND TRANSFORMERS				
L204	ELEPK1R2MA	001 211 0621 4	CHOKE COIL	
L225	SLF6C1-10	001 214 1576 3	ANTENNA COIL	
L226	SLA2B1-M	001 211 1077 2	ANTENNA COIL	
L227	SL02B7-M	001 211 0859 4	OSCILLATOR COIL	
L350, L351	SLQX272-1YT	001 211 0649 2	CHOCK COIL	
L355	SL09Z15-M	001 211 4091 2	OSC COIL	Ⓜ
L505	ELEPK101KA	001 211 0855 8	CHOCK COIL	
L506	ELEPH101KA	001 211 2987 9	CHOKE COIL	
L901	ELEXT101KA	001 211 3878 9	COIL	
T225	SLI4B108-M	001 211 2792 8	I.F. TRANSFORMER	
T226	SLI2B101-M	001 211 0654 5	I.F.TRANSFORMER	
T227	SLI4B519-Z	001 215 2839 0	I.F.TRANSFORMER	
T701 ⚠	SLT5L275-K	001 202 8991 0	POWER TRANSFORMER	Ⓜ
FILTERS				
CF225	SVFE107MS2-A	001 241 0777 7	CERAMIC FILTER	
CF226	SVFSFZ450F7L	001 241 0429 4	CERAMIC FILTER	
OSCILLATORS				
X901	SVQ43U452-D	001 250 1506 3	CRYSTAL OSC	
DISPLAYS				
LCD90	SALHLC9225-9	001 080 0308 7	DISPLAY	
LAMPS				
PL201	XAMR78S250	002 351 0397 4	LAMP	
SWITCHES				
S71	SSS167	003 431 3107 3	SWITCH SLIDE	
S72	SSP66	003 434 0543 4	SWITCH	
S382, S383	SMQT1466	003 434 0907 6	LEAF SWITCH	
S384, S385	SMQT1451	003 434 0905 8	LEAF SWITCH	
S386	SMQT1615	003 434 0993 2	LEAF SWITCH	
S401	SSH1194	003 435 6157 1	PUSH SWITCH	
S501, S502	SSH4109	003 435 6248 9	SWITCH	
S503, S504	SSH4109	003 435 6248 9	SWITCH	
S701 ⚠	SSH1071	003 435 3185 9	SWITCH	
S901, S902	SSG13	003 435 2951 9	SW	
S903, S904	SSG13	003 435 2951 9	SW	
S905, S906	SSG13	003 435 2951 9	SW	
S907, S908	SSG13	003 435 2951 9	SW	
S909, S910	SSG13	003 435 2951 9	SW	
S911, S912	SSG13	003 435 2951 9	SW	
S913, S914	SSG13	003 435 2951 9	SW	

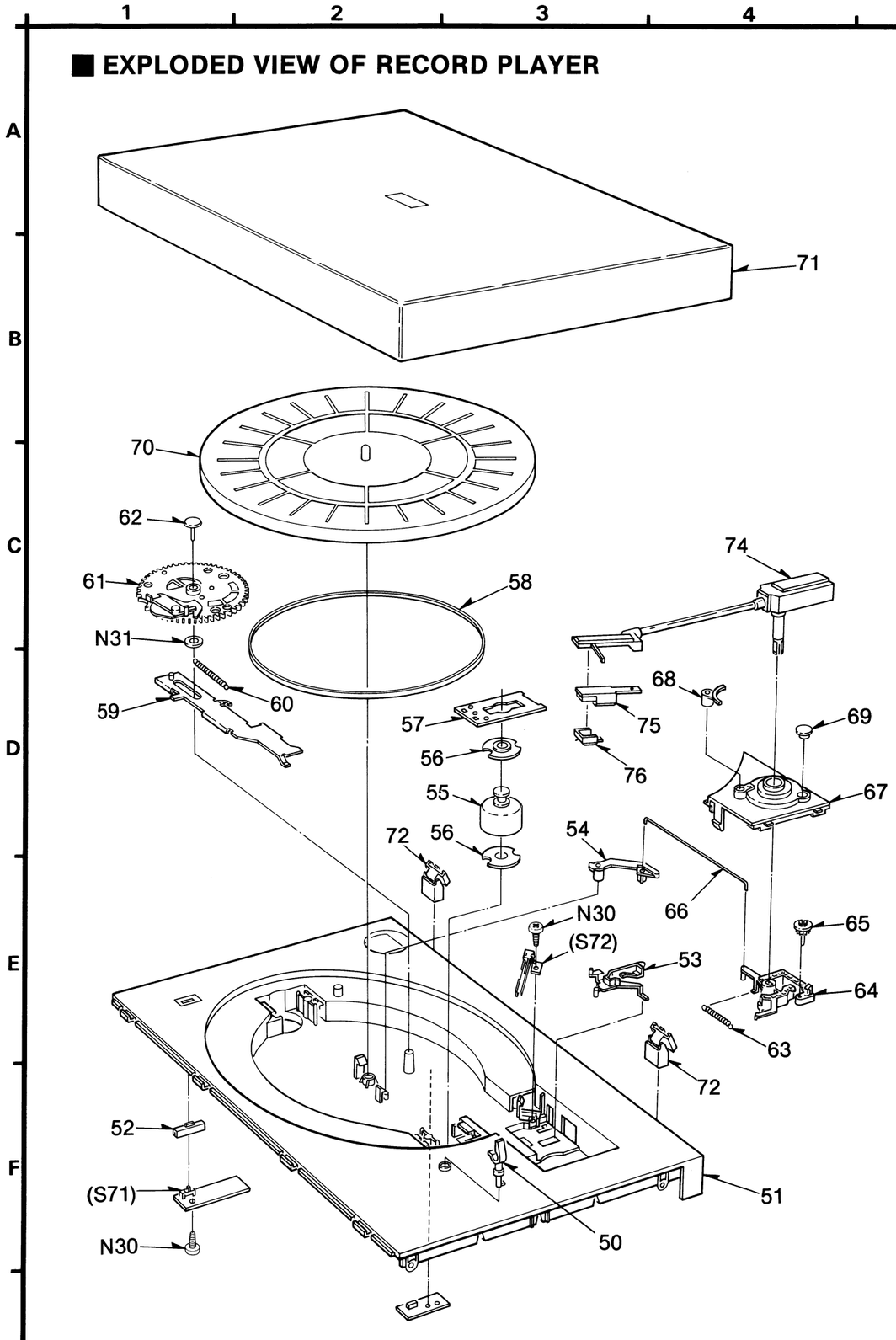
Ref. No.	Part No.	Part Code	Description	
CABINET AND CHASSIS				
1	SGXGD16-KM	016 846 3793 9	CASSETTE HOLDER	Ⓜ
1-1	QBP2006A	015 727 0706 8	SPRING	
2	SGXGD16-KM1	016 846 3794 8	CASSETTE HOLDER	Ⓜ
2-1	QBP2006A	015 727 0706 8	SPRING	
3	SBN1203	016 700 1964 7	KNOB	
4	SBD118	016 700 1589 0	KNOB	
5	SGYGD16-KM	016 840 7617 8	FRONT PANEL	Ⓜ
6	SNE4060	005 513 3686 2	SPEED WASHER	
7	SBC666-1	016 702 6076 0	BUTTON	
8	SBC918	016 702 6923 6	BUTTON	
9	SMQ30030	016 650 5149 1	ANGLE	
10	SMQ4096	016 745 0063 0	GEAR	
11	SMQ60019	016 726 0729 8	SPRING	
12	SUW2995	016 650 5182 0	BRACKET	
13	SBCGW7CD-KN	016 702 6927 2	BUTTON	
14	SBC916	016 702 6925 4	BUTTON	
15	SBC917	016 702 6924 5	BUTTON	
16	SBC919	016 702 6922 7	BUTTON	
17	SBC920	016 702 6921 8	BUTTON	
18	SJJ138	003 400 7718 9	JACK	
20	SMP409	016 632 1787 5	LAMP CASE	
21	SDU296	016 842 1321 5	GLASS,TRANSPARENT PLATE	
22	SUW3048	016 650 5337 9	BRACKET	
23	SUW3046	016 650 5338 8	BRACKET	
24	SMC6437	016 601 0626 8	SHIELD PLATE	Ⓜ
25	SMC6439	016 601 0625 9	SHIELD PLATE	Ⓜ
26	SHR9094	016 640 0048 1	LATCH	
27	SKUGD16-KM	016 802 2183 7	BOTTOM BOARD	Ⓜ
28	SKM7621U	016 800 3018 5	CABINET ASS'Y	
29	SHS3276	016 655 0659 9	FOOT	Ⓜ
30	SJF4442	003 410 5983 6	TERMINAL BOARD	
31	SJF3250	003 410 8059 1	TERMINAL BOARD	
32	SJF4231	003 410 8160 5	TERMINAL BOARD	
33	SUW3045	016 650 5378 0	BRACKET	Ⓜ
34	SGPGD16-KM	016 840 7618 7	REAR PANEL	Ⓜ
35 ⚠	SJA174K	003 490 5403 9	POWER CORD	Ⓜ
36	SHR129	016 645 0038 8	BUSHING, AC CORD	
37	SHR301	016 645 0044 0	CLAMPER	
38	SJT783	003 410 6001 7	CONTACT	
39	SJS5331	003 400 5924 3	CONNECTOR	
39	SJS5523	003 400 5916 3	CONNECTOR	
39	SJS5811	003 400 5930 5	CONNECTOR	
40	SJS5215	003 400 5923 4	CONNECTOR	
40	SJT3213	003 410 6011 5	CONNECTOR	
40	SJT3319	003 403 3892 7	CONNECTOR	
40	SJT3511	003 403 3893 6	CONNECTOR	
40	SJT3809	003 410 6013 3	CONNECTOR	
41	SJT785	003 410 6015 1	CONTACT	
42	SJS5337	003 400 5925 2	CONNECTOR	
43	SJT30540LX-V	003 410 5996 1	CONNECTOR	
43	SJT30640LX-V	003 410 6149 8	CONNECTOR	
SCREWS,WASHERS & NUTS				
N1	SNE4021	005 507 0372 5	NUT	
N2	SNE2120	005 500 5609 8	SCREW	
N3	XTB3+8G	005 501 2607 7	SCREW	
N4	XTB3+8JFR	005 501 3433 7	SCREW	
N5	XTB3+8JFZ1	005 501 2523 0	SCREW	
N6	XTB3+10G	005 501 2647 9	SCREW	
N7	XTB3+10GFR	005 501 3126 5	SCREW	
N8	XTB4+8F	005 501 1608 0	SCREW	
N9	XTB4+12JFZ	005 501 2857 1	SCREW	
N10	XTW3+10T	005 501 0996 9	SCREW	
N11	XTW3+10TFR	005 501 2759 2	SCREW	
N12	XTWS3+10Q	005 501 2293 5	SCREW	
N13	XTB3+8J	005 501 1535 0	SCREW	

Ref. No.	Part No.	Part Code	Description	
RECORD PLAYER				
50	SJY5218	016 700 1539 0	PU REST	
51	SJYGW7CD-KN	016 802 2148 0	CABINET PLATE	
52	SBN1132	016 700 0452 0	KNOB	
53	SJY5223	016 650 5081 4	BRACKET	
54	SJY5222	016 718 3373 0	LEVER	
55	MMNGD16-KM	002 310 2543 3	DC MOTOR	Ⓜ
56	SHG9260	016 653 0567 2	RUBBER CUSHION	
57	SJY90456	016 632 1861 2	ANGLE	
58	SJY90080-1	016 754 0008 6	BELT	
59	SJYGX7-KM1	016 630 1800 5	PLATE	
60	SJY90406	016 726 0069 1	SPRING	
61	SJYGD16-KM	016 745 0241 0	MAIN GEAR ASS'Y	Ⓜ
62	SHR417	016 652 0751 9	PLASTIC SPACER	
63	SUS786	016 726 0923 8	SPRING	
64	SJY5220	016 716 0043 7	CAM	
65	SJY5221	016 716 0044 6	CAM	
66	SJY90455	016 718 3371 2	LEVER	
67	SKM7540-2	016 800 3019 4	PLATE	
68	SJY5224-3	016 718 3372 1	LEVER	
69	SHG9246-1	016 653 0560 9	RUBBER, CAP	
70	SJYGW7CD-KN2	016 766 0221 7	TURN TABLE	
71	SYE1112	016 820 0566 2	DOOR,LID	
72	SFATZ15R01	017 824 0020 3	HINGE	
74	EPA645STA	001 271 0701 9	PICKUP ARM	
75	EPC13STH	001 272 0035 5	CARTRIDGE	
76	EPS41ST	001 272 0093 5	STYLUS	
SCREWS,WASHERS & NUTS				
N30	XTB3+10G	005 501 2647 9	SCREW	
N31	XWE8D14	005 513 3527 6	WASHER	
PACKINGS				
P1	SPG5834	016 971 5008 5	CARTON BOX	Ⓜ
P2	SPS4894	016 977 3302 0	PAD	Ⓜ
P3	SPS4895	016 977 3301 1	PAD	Ⓜ
P4	SPS4896	016 977 3300 2	PAD	Ⓜ
P5	SPS4897	016 977 3299 8	PAD	Ⓜ
P6	SPS4953	016 977 3298 9	PAD	Ⓜ
P7	SPP748	016 978 0497 1	PROTECTION COVER	
P8	SPPB1	016 978 0487 3	PROTECTION COVER	
ACCESSORIES				
A1	SQF12846	016 983 5116 6	INSTRUCTION BOOK	Ⓜ
A3	SSA269	002 390 0864 9	COAD	
A4	SJY5018-1	016 652 0166 0	ADAPTOR	

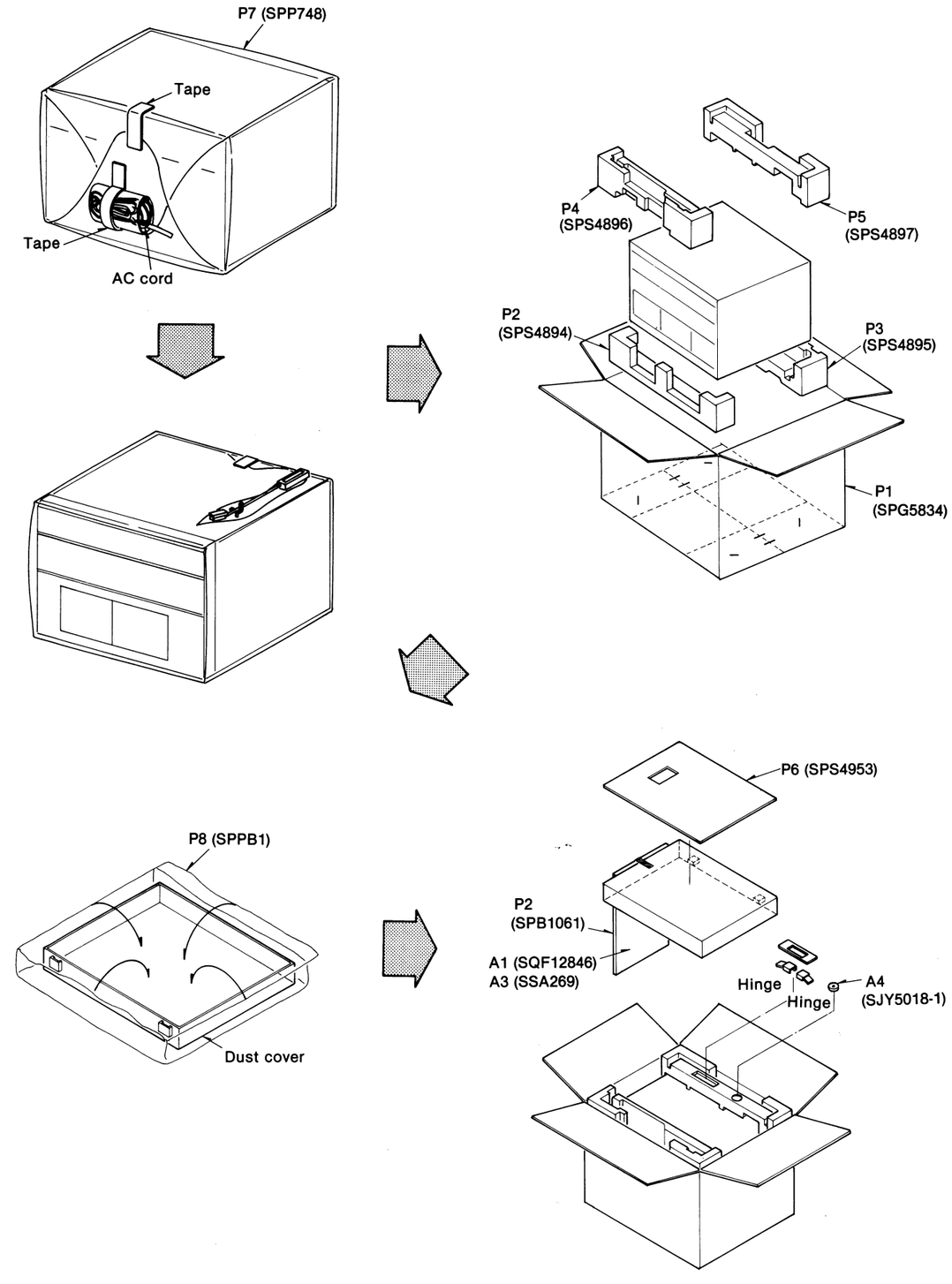
■ EXPLODED VIEW OF CABINET AND CHASSIS



■ EXPLODED VIEW OF RECORD PLAYER



■ PACKING



Printed in Japan
870203900 Ⓗ SN/AH/TM/KK